

Family Medicine **OSCE** First Aid

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PREFACE

The idea of writing this syllabus came to us when we were preparing for the 2014 end of year OSCE's in our Family Medicine Residency Program. The need for a single resource that can encompass most clinical scenarios needed to pass the exam was very evident. Although many resources of OSCE style exams were available to us, we wanted to invest an effort in gathering existing and writing new OSCE stations that we think are most relevant to the Arab Board OSCE examination in Family Medicine. It was a huge and daunting task but with efficient teamwork and unwavering commitment on the part of all the residents who contributed, we managed to complete the project in record time.

We hope this compilation is handy, easy, and focused enough to reduce the anxiety of all those who are studying to pass the Arab Board Certification Exam in Family Medicine. We wish to thank our Program Director for the spirit of collegiality that inspired this work and for editing the final write up.

Please note that, the content of this book takes into consideration previously reviewed exam checklists but is not bound by any particular international guideline.

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Tips to pass OSCE Examination

General advice

- Arrive 15 to 20 minutes earlier than your scheduled session.
- Dress neatly and professionally and clip your fingernails before the exam.
- Knock before entering the exam room.
- Feel free to take notes during the encounter.
- Concentrate on the case you are working on.
- Be calm and show confidence.
- Read the given instructions for each station carefully; do not skip any sentences or lab values.
- Never attempt to communicate with the patient other than as a physician.
- Greet the patient and state your name and position (Family Medicine Resident).
- Confirm patient's name.
- Explain your task to the patient.
- Maintain eye contact.
- Use proper posture (lean forward with uncrossed arms and legs).
- Use clear language and avoid medical jargon.
- If you don't know the answer, address your limitation and do not give false information or information you are not sure about.
- Notify proctors or evaluators of any problems.
- Close the encounter when the audio signal is given to leave the station.
- Bring your stethoscope, pen and calculator.
- Address patient ideas, concerns and expectation (ICE).

History Taking

- Begin with broad questions and then focus your inquiries.
- Use non-verbal encouragement, pauses and give patient time to answer.
- Don't interrupt the patient's answers off with another question.
- Repeat your questions in different terms if necessary.
- Ask follow-up questions; Example: "You said you don't drink alcohol, did you ever drink alcohol?"

- Ask about chief complain, history of presenting illness, past medical and surgical history, drug history, social and family history.
- Summarize.

Physical Exam

- Wash your hands between patients, preferable before touching the patient or beginning the physical examination.
- Ask the patient if there any pain now and where, to keep this area the last to be examined.
- Tell the patient when you are going to begin the physical exam.
- Describe the maneuvers either before or as you do them.
- Always use patient gowns and drapes appropriately to maintain patient modesty and comfort, but never examine through the gown.
- Do a focused examination based on the patient's complaint or what you are asked to do.
- Look for physical findings.
- Note the time warning for 2 minutes remaining in the encounter.
- Stop the encounter when the "End of Encounter" signal is given.
- If you remember something that you should have done earlier then go back and do this.
- Get patient on and off the exam bed.
- Be polite. Thank your patient and your examiner too.
- Return any given equipment if appropriate.
- If appropriate, tell the patient your initial impressions and your plan in the diagnostic work-up.
- If appropriate, ask for, and answer any additional questions.
- Do not perform rectal, pelvic or genital, or female breast exams.

Counseling

- Follow the 5 A's if applicable (Ask, Advice, Assess, Assist and Arrange):
 - Ask relevant questions.
 - Advise (CE [Ideas, Concerns and Expectation]).
 - Give appropriate health maintenance advice.
 - Give educational material.

During all Patient encounters, each patient will evaluate your skills as a physician based on the following criteria:

- Skills in interviewing and collecting information.
- The clarity of your questions.
- The effectiveness of your questioning techniques.
- Appropriate use of medical language.
- Your verification and summarization of information.
- The effectiveness of your transitions throughout the different parts of the interview.

Skills in counseling and delivering Information

- The clarity of information you give.
- The effectiveness and sincerity of your counseling.
- The thoroughness of the encounter closure.
- The clarity and appropriateness of your speech.
- How effectively you summarize and synthesize the information you gather.

Rapport (connection between doctor and patient)

- Your attentiveness.
- The appropriateness of your body language.
- Your confidence level, attitude.
- The level of empathy and support you show.

Personal Manner

- Your manner while conducting physical examinations and sensitivity to patient modesty, including appropriate draping.
- The appropriateness of your mood and your manner of introducing yourself.

Neonatal Examination

1. Introduce yourself.
2. Congratulate parents and take permission to examine the baby.
3. Wash your hands.
4. Explain to parents what you are going to do.
5. Measure:
 - a. Vital signs.
 - b. Growth chart including weight, length and head circumference.
6. Comment on general appearance
 - a. Dismorphic features: cleft lip (Down syndrome), small jaw or Robin syndrome).
 - b. Cry: feeble, pitch.
 - c. Color: jaundice, cyanosis, mottling.
 - d. Degree of distress if any.
7. Examine the head
 - a. Fontanelles (size, bulge).
 - b. Sutures (split, overriding).
 - c. Shape (molding).
 - d. Swellings (cephalocephaloma, caput succedaneum).
8. Examine ear, nose, throat and neck
 - a. Visualize: Palate (cleft, Epstein' pearls, gums).
 - b. Palpate: with your little finger inside the mouth (cleft palate, high arched palate in Marfan Syndrome).
 - c. Ears: Position, skin tags.
 - d. Neck evaluation: masses, abnormalities, range of motion.
 - e. Clavicle.
9. Examine the eyes
 - a. Check red reflex.
 - b. Check for any discharge.

10. Examine the lungs
 - a. Auscultates bilaterally, anterior and posterior.
 - b. Work of breathing (retractions, nasal flaring, respiratory rate, head bobbing, accessory muscle use).
11. Examine the cardiovascular system
 - a. Auscultates 4 points on chest (Apex, lower and upper left sternal borders then right upper sternal border).
 - b. Femoral and peripheral pulses.
12. Examine the abdomen
 - a. Inspect for distention (obstruction), scaphoid abdomen (in diaphragmatic hernia), comment on umbilical stamp (bleeding, discharge).
 - b. Check liver, spleen and kidney size.
 - c. Check the umbilical cord (if only 1 artery, think of renal problems).
 - d. Palpate for Masses, umbilical and inguinal hernia.
 - e. Auscultate bowel sounds.
13. Examine the genitourinary system
 - a. Male
 - Scrotum: check that testes are descended, check for hydrocele, or hernia.
 - Penis: size, location of meatus (ventral in hypospadias).
 - Anus: patency and location.
 - b. Female
 - Hymen and labia (hymenal tags and discharge).
 - Clitoris and urethra (clitoromegaly).
 - Anus: patency and location.
14. Perform neurologic exam
 - a. Level of alertness.
 - b. Tone.
 - c. Check root, Moro and grasp reflexes.
 - d. Ensure new born moves all 4 limbs.
15. Examine the extremities including hips
 - a. Barlow and Ortolani tests.
 - b. Examines feet: looking for clubfeet.
 - c. Obvious deformities in the digits like polydactyly or syndactyly.
 - d. Check range of motion.

Cranial Nerves Examination Central

1. Introduce yourself.
2. Ask for his or her name, and take permission to examine
3. Wash your hands and maintain privacy.
4. Explain what you are going to do.
5. Expose the body parts to be examined appropriately.
6. Comment on patients general appearance.

Cranial Nerve I: Olfactory nerve:

- a. Ask the patient: Did you notice any change in smell?
- b. Check smell using a known odor (Not a strong one) e.g. Apple.
- c. Tell the patient "Close one nostril, can you smell this? Now the other one please, Can you smell this?"

Cranial Nerve II: Optic Nerve

- a. Visual acuity: ideally you should check using Snellen chart. If not available, you can check roughly:
 - "Can you read this newspaper, please?"
 - If not able "How many fingers are in front of you?"
 - If not able "Can you see the hand moving?"
 - If not able then check for light perception.
- b. Visual field:
 - Use a Finger or redheaded pin confrontation test.
 - Ask the patient to cover his right eye, you should cover your left eye (Mirror the patient). Ask the patient to look directly at you and not move his head during the test.
 - Face the patient and examine each eye separately from the outer aspect (3 directions, 10 o'clock, 2 o'clock and 8 o'clock).
- c. Pupils:
 - Symmetry e.g: pupils look rounded and symmetrical.
 - Test for light reflex (direct and consensual reflexes, cranial II afferent – Cranial III efferent).

- Accommodation (response to looking at something moving toward the eye).
- d. Fundoscopy.
 - Red reflex (from one foot away, check for corneal or lens opacities; cataract or retinoblastoma).
 - Optic disc (gray- optic atrophy; Pale cup- glaucoma; Swelling- papilloedema).
 - Retinal vessels and any lesions or spots.
 - Macula (temporal view).
- e. Check color vision using Ishihara plates.

Cranial nerves III, IV, VI (Oculomotor, Trochlear and Abducent)

- a. Inspection: inspect the eye for abnormal position (squint), ptosis.
- b. Position the patient's head in neutral position and fix the head
 - Ask the patient: "Look at my index finger, follow it with your eyes"
 - Ask the patient to report any double vision "Tell me if you see my index finger doubled (diplopia)".
 - Move your finger in all directions (draw an H shape in the air):
 - Up and medially (inferior oblique muscle).
 - Laterally, down and medially (superior oblique).
 - Look for nystagmus, and comment on the following:
 - Uniphasic known as pendular type OR biphasic known as central type.
 - Vertical nystagmus indicates central nervous system (CNS) lesion or horizontal indicates peripheral nervous system (PNS) lesion.
 - Note movement of the fast component
- c. Test for convergence by asking the patient to look at a near object
 - Note that superior rectus muscle, medial rectus, inferior rectus, Inferior oblique, levator palpebrae superiorus produce the convergence reflex.
 - Remember the nerve supply of the extra-ocular muscles
 -  Superior oblique muscle supplied by IV.
 - Lateral rectus supplied by VI.
 - All other extra-ocular muscles supplied by III.
 - Note that lesions in these cranial nerves would present as follows:

- Cranial nerve III lesion, eye will go down and out, pupil dilated, ptosis
- Cranial nerve IV lesion, eye will go up and out. Patient cannot move it down.
- Cranial nerve VI lesion, eye will go down and in. Patient cannot move it laterally.

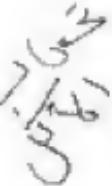
Cranial nerve V: Trigeminal nerve: 3 divisions (ophthalmic, maxillary, mandibular)

- a. Inspect for temporal wasting and jaw deviation.
- b. To check the sensory functions, demonstrate sensation on the patient's sternum first to ensure he knows what it should feel like (sensations to be checked at the areas supplied by the three branches while the patient is closing his or her eyes. Ask the patient to volunteer his sensation rather than wait for you to ask if he or she feels. Remember to compare both sides):
 - Light touch using fingertip or a cotton ball
 - Pain sensation using pin-prick
 - 2-point discrimination
- c. Check the motor function (by mandibular branch only):
 - "Clench your teeth" (feel for masseters and temporalis muscles)
 - "Open your mouth, stop me from closing it"
 - Ask the patient to move their jaw to either side and apply resistance to it.
- d. Reflexes:
 - Jaw reflex
 - Corneal reflex: touch the cornea with the tip of cotton by approaching the eye from the side in a way that the patient does not see the cotton tip [afferent is Cranial nerve V and efferent Cranial nerve 7]

Cranial nerve VII: Facial nerve

- a. Inspection: forehead (comment on any eyelid sag), naso-labial fold (comment on any flattening), mouth corner (comment on any droop)
- b. Movements (Explain: "I will check your muscles of facial expressions"):
 - Look up or raise your eyebrows; look for symmetrical wrinkles of forehead

- Close your eyes tightly and don't let me open them.
- Blow your cheeks or whistle.
- Smile or show me your teeth.

 Sensory: Taste sensation in anterior 2/3 of tongue on each side: hold the tongue with gauze; touch each side of it with sugar, salt and vinegar. Ask: "what does it taste like?"

Cranial nerve VIII: Vestibulo-Chochlear nerve

a. Hearing

- Ask: "Any problems with hearing?"
- Rub fingers and thumb together in front of each ear in turn and ask, "Can You hear that?"
- Whisper test (whisper in each ear separately 1, 2, 3 while distracting the other ear by wrinkling a paper and ask the patient to repeat what you said). If impaired perform: Rinne and Weber tests.
- Weber's Test: strike the ~~512 Hertz~~ tuning fork and place it on the middle of the forehead. Ask if the patient hears it in both ears equally? If not ask, "Where is it higher right or left?"
- Rinne's Test: strike the 512 Hz tuning fork and place it on the mastoid bone. Ask the patient if he or she can hear and instruct him or her to let you know when they do not. This is testing for Bone Conduction (BC). When no longer heard, move it in front of the hearing canal (2.5 cm from the external auditory meatus) until he or she can't hear and this tests for Air Conduction (AC) and compare the interval
- Classify the patient accordingly:
 - Normal: AC more than BC (with AC intervals is twice that of BC) and Weber is equal on both sides.
 - Conductive hearing loss: BC more than AC and Weber lateralizes towards the affected ear
 - Sensorineural hearing loss: AC more than BC and Weber lateralizes towards the normal ear

b. Vestibular test or Dix Hallpike test.

c. Romberg test: Ask the patient to stand with their feet together (touching each other). Then ask the patient to close their eyes. Remain close at hand in case the patient begins to sway or fall.

Cranial Nerves XI and X: Glossopharyngeal and Vagus Nerves

- Keep your mouth open, say "aaaa" and inspect Uvula: central or deviated to one side
- Gag reflex: Touch the back of the pharynx with a tongue depressant
- Voice: Hoarseness - nasal tone
- Test sensation in posterior 1/3 of tongue
- Swallowing

Cranial Nerve XI: Accessory Nerve Innervate trapezius and sternocleidomastoid muscle

- Stand behind the patient and inspect the trapezius muscle (comment on any atrophy or fasciculations?)
- Ask the patient: "Shrug your shoulders, keep them shrugged." Push down the shoulders
- Inspect sternocleidomastoid muscle bilaterally
- Ask the patient: "Turn your head to left side and then to the right." Feel for the sternocleidomastoid muscles on the side opposite to the turned head.

Cranial Nerve XII : Hypoglossal (motor only)

- Ask the patient "Open your mouth". Look for tongue wasting and fasciculation "Put your tongue out". Look for tongue deviation (it deviates towards the affected side of the brain)
- "Wiggle it from side to side". Look for tongue movement

7. To complete neurological examination mention: "I would like to examine the gait, power and reflexes, Comment on patient consciousness and orientation to time, place and person, check for neck stiffness and meningeal signs"

8. Give feedback and thank the patient.

9. Ensure systematic approach.

Mini Mental State Exam

1. Introduce yourself
2. Explain what you are going to do

	Questions	Time	Score
1	a. What year is this? b. Which season is this? c. What month is this? d. What is today's date? e. What day of the week is this?	10 seconds 10 seconds 10 seconds 10 seconds 10 seconds	/1 /1 /1 /1 /1
2	a. What country are we in? b. What province/emirate are we in? c. What city/town are we in? d. IN HOME - What is the street address of this house? IN FACILITY - What is the name of this building?	10 seconds 10 seconds 10 seconds 10 seconds	/1 /1 /1 /1
	e. IN HOME - What room are we in? IN FACILITY - What floor are we on?	10 seconds	/1
3 words	SAY: I am going to name three objects. When I am finished, I want you to repeat them. Remember what they are because I am going to ask you to name them again in a few minutes. Say the following words slowly at 1-second intervals - ball/ car/ man	20 seconds	/3
4	Spell the word WORLD. Now spell it backwards.	30 seconds	/5
5	Now what were the three objects I asked you to remember?	10 seconds	/3
6	SHOW wristwatch. ASK: What is this called?	10 seconds	/1
7	SHOW pencil. ASK: What is this called?	10 seconds	/1
8	SAY: I would like you to repeat this phrase after me: No ifs, ands or buts.	10 seconds	/1
9	SAY: Read the words on the page and then do what it says. Then hand the person the sheet with CLOSE YOUR EYES on it. If the subject reads and does not close their eyes, repeat up to three times. Score only if the subject closes eyes.	10 seconds	/1

10	HAND the person a pencil and paper. SAY: Write any complete sentence on that piece of paper. (Note: The sentence must make sense. Ignore spelling errors)	30 seconds	/1
11	PLACE design, eraser and pencil in front of the person. SAY: Copy this design please?	1 minute	/1
	 Allow multiple tries. Wait until person is finished and hands it back. Score only for correctly copied diagram with a 4-sided figure between two 5-sided figures.		
12	ASK the person if he is right or left-handed. Take a piece of paper and hold it up in front of the person. SAY: Take this paper in your right or left hand (whichever is non-dominant), fold the paper in half once with both hands and put the paper down on the floor. Score 1 point for each instruction executed correctly.	30 seconds	/1 /1 /1
TOTAL TEST SCORE			/30

(McIlroy, 2015)

3. Total Score Interpretation:
 - a. Normal Score is more than or equal to 24 points.
 - b. 18-23 points is indicative of Moderate Dementia.
 - c. Less than or equal 17 points is Severe Dementia.
4. Give feedback and thank the patient.
5. Ensure systematic approach.

٤- الاماكن

٣- (أمثلة وحقائق كلام)

مل عداده (مفهوم) ، ایضاً ملکه نهضه
دست همه معتبره ، هنر آلمان و کنسر

Eye Examination

1. Introduce yourself
2. Wash your hands
3. Explain why and what you are going to do and ensure a systematic approach
4. Expose the body parts to be examined appropriately and take permission to examine the patient.
5. Inspect
 - a. Face: comment on any dermatomal rash (herpes zoster), eyebrows: seborrhoeic dermatitis.
 - b. Eye position and alignment (exophthalmos or strabismus).
 - c. Eye lid: comment on any swelling (stye or chalazion), scars, discharge, xanthelasma, eyelashes (entropion or ectropion), ptosis.
 - d. Lacrimal apparatus: Look for any swollen lacrimal sac.
 - e. Sclera and conjunctiva: comment on red eye (conjunctivitis, scleritis or episcleritis), jaundice, pallor.
 - f. Cornea, iris and lens: comment on any opacities (cataract).
 - g. Pupils: comment on size (miosis or mydriasis), shape, symmetry (anisocoria or unequal size of pupils), reaction to light (direct and consensual).
 - h. Iris: comment on iris, roborosis/ridis or iridectomy if present.
6. Palpate Remember to look at the face of the patient in case of tenderness
 - a. Eye ball for tenderness and tension (high intraocular pressure).
 - b. Measure intraocular pressure if Tonopen available.
7. Visual Acuity: use Snellen's chart at 6 m distance and cover the other eye properly
8. Check color vision: use Ishihara plates
9. Check Range of Motion: Draw an H shape in the air, asks the patient to follow your finger and observe extra ocular eye movements. (Cranial Nerves III, IV, VI)
10. Visual field: confrontation test at 20 to 30 cm distance while covering one eye (check in all directions: nasal and temporal fields bilaterally)

- Ophthalmoscopy (check the machine before starting): Dim the lights and ask the patient to fix his or her sight at a specific object (looking straight). Remember to test the right eye with the right hand and come (examine) from the right side of the patient.
 - Check pupillary light reflex
 - Red reflexes
 - Anterior structures: comment on any vitreous floaters or cataract
 - Optic disk: clarity of outline, color, elevation and condition of the vessels. (any papilledema, glaucomatous cupping, optic atrophy, arteriovenous nipping, or copper wiring).
 - Background of the retina (comment on any hemorrhages, exudates, cotton-wool patches, microaneurysms, pigmentations)
 - Macula: you will find it temporal to the optic disk, or ask the patient to look directly at the ophthalmoscope light, this will automatically place the macula in full view.
(comment on any macular degeneration)

Give feedback and thank the patient.

Ensure systematic approach.

Ear Examination

1. Introduce yourself
2. Wash your hands
3. Explain why and what you are going to do and ensure a systematic approach.
4. Expose the body parts to be examined appropriately and take permission to examine the patient
5. Inspect bilaterally: any deformity, swelling, lump or foreign body, skin changes (rash, redness, scars, keloids, epidermoid cyst) or discharge. Look behind the ears for scars.
6. Palpate bilaterally:
 - a. Temperature
 - b. Tenderness: over the auricle, tragus, mastoid bone, and any masses.
 - c. Tug test: move the auricle up and down, press on the tragus (pain indicating otitis externa)
7. Otoscopy (bilaterally, starting with the normal side): Pull the auricle upward, backward and slightly outwards for adults and downward and backward for children. Through the otoscope speculum observe and comment on: the canal (cerumen, swelling, erythema), ear drum (erythema, bulging, light reflex, tympanosclerosis, perforation, or any grommet)
8. Tympanometry if available.
9. Test hearing:
 - a. Close the other ear, whisper numbers (patient should not read the lips of examiner) or rub 2 fingers near to the tested ear.
 - b. Special tests (Use a 512 Hertz tuning fork.)
 - * Rinne's test
First place the tuning fork over the mastoid bone until no further sound is heard, then keep it near the external canal of the ear (2.5 centimeter).
Interpret as follows:
 - Normal if: Air conduction (AC) more than Bone conduction (BC)

- Conductive deafness if: BC more than AC
- Sensory neural deafness if: AC more than BC

- **Weber test**
 - Tuning fork is placed at the center of the forehead. Interpret as follows:
 - Normal: If sound heard equally on both sides.
 - Conductive deafness: If sound heard higher on the affected side.
 - Sensory neural deafness: if sound heard higher on the normal side.

10. Eye (bilateral): look for any evidence of nystagmus.
11. Dix-Hallpike Maneuver: seat the patient at the edge of the examination table then assist him or her to lie down suddenly with the head hanging 45° backward and turned 45° to one side (once to right, once to left and once in the middle) while keeping the eyes open. Check for development of vertigo or nystagmus. Interpret as follows:
 - a. Severe vertigo or nystagmus of fixed direction with characteristic onset after 3 to 10 seconds, and that lessen with repetition indicating peripheral cause of vertigo
 - b. Mild vertigo or nystagmus of variable direction with immediate onset and continuous presence with repetition indicating central cause of vertigo
 - c. Can be followed by Epley's maneuver as a therapeutic option of BPPV to remove debris from the semicircular canals and deposit it in the utricle where hair cells are not stimulated.
12. Give feedback and thank the patient.
13. Ensure systematic approach.

Thyroid Examination

1. Introduce yourself
2. Wash your hands and maintain privacy.
3. Explain what you are going to do
4. Expose the body parts to be examined appropriately and take permission to examine the patient.
5. General inspection (take a step back and observe)
 - a. Obese or thin. BMI
 - b. Greasy or brittle hair. palor
 - c. Depressed, pale or irritable.
 - d. Inappropriate dressing to the current weather.
 - e. Puffy cheeks (myxoedematous facies in hypothyroidism).
6. Hand exam:
 - a. Inspect: Sweaty or dry, comment on any palmar erythema, onycholysis, thyroid acropachy (clubbing), fine tremors (put a piece of paper on the patient's outstretched hands), and xanthomas.
 - b. Palpate: radial pulse for rate and rhythm (bradycardia or atrial fibrillation or collapsing pulse).
7. Eye exam: Inspect for
 - a. Exophthalmos (observe from lateral aspect)
 - b. Evidence of palor (anemia common in hypothyroidism)
 - c. Xanthelasma (secondary hyperlipidemia)
 - d. Periorbital edema (chemosis)
 - e. Loss of lateral 1/3 of eyebrow "Cleopatra sign"
 - f. Proptosis (protrusion of the eyeball - seen better from above)
 - g. Special tests: Lid lags (delay in the drop of the upper eye lid), lid retraction (sclera visible above the cornea), and extra ocular muscles movements.
8. Thyroid:
 - a. Inspection:
 - Any swelling or goiter, discolored, discharges, pulsations, or scars.

Per Cough

- Hand the patient a glass of water, ask him to take a sip and watch the thyroid movement when the patient swallows.
- Ask the patient to stick out his tongue. Observe for any moving cyst (thyroglossal duct cyst, the commonest anterior neck mass in children, moves up with such movement while thyroid nodule does not).
- b. Palpate (from back using right index and middle fingers): thyroid isthmus and lobes (comment on size, texture, if any swelling (diffuse or nodular), mobility and tenderness). Palpate for any lymph node enlargement.
- c. Percuss: over the clavicles and sternum (extension for goiter).
- d. Auscultate: bruits or thrill.
- e. Special test: Pemberton's sign (ask the patient to raise both arms above the head). Positive if the patient experiences inspiratory stridor, facial flushing and distended neck veins occurs in retrosternal goiter.

9. **Leg exam:**
 - a. Inspect: shins for hair distribution and any pretibial myxedema.
 - b. Check for proximal myopathy by asking the patient to stand up without the use of their hands or by asking the patient to rise from squatting position
 - c. Reflexes: Knee and ankle jerk. Look for any delay in relaxation or a brisk jerk.
10. Finish up examination by examining cardiorespiratory system for signs of heart failure or pleural effusion in acute thyrotoxicosis.
11. Give feedback and thank the patient.
12. Ensure systematic approach

Cardiovascular System Examination

1. Introduce yourself
2. Wash your hands
3. Explain why and what you are going to do and expose the chest appropriately
4. Look at the observation chart for temperature, oxygen saturation and blood pressure (ideally check blood pressure in all four limbs, in supine and standing position for orthostatic hypotension).
5. Inspect:
 - a. Around the bed: nitroglycerin spray (ischemic heart disease), oxygen mask or nasal prongs, drips (infective endocarditis), cigarettes.
 - b. The patient: comfortable at rest, cyanosis, breathless, any syndromic features (Marfan's, Down's, Turners), and cachexia.
 - c. Hands: clubbing (congenital cyanotic heart disease, infective endocarditis, atrial myxoma), splinter hemorrhages, Osler's node, capillary refill time, peripheral cyanosis, nicotine staining, paler palmar creases (anemia), Janeway lesions, tendon xanthomata (hypercholesterolemia).
 - d. Check the radial pulse: assess rate (over 15 seconds) and rhythm (sinus, regularly irregular or irregularly irregular). Assess for radio-radial delay (coarctation of the aorta). Check for collapsing pulse (found in aortic regurgitation)
 - e. Feel the brachial pulse: assess the character (slow rising, bounding, pulsus arterans, pulsus bisferiens).
 - f. Face: look for sign of pain (ischemic heart disease), Cushing's, malar flush (mitral stenosis).
 - g. Eyes: xanthelesma, corneal arcus, anemia, ophthalmoscopy (look for Roth spots and hypertensive retinopathy)
 - h. Mouth: high arch palate (Marfan's), central cyanosis, telangiectasia
 - i. Check the neck:
 - * Assess the jugular venous pressure (a direct assessment of right atrial pressure indicating central venous pressure): Position the patient at 45 degrees and turn his or her head slightly to left. Look for a rising column of fluid between the 2 heads of sternocleidomastoid muscle. If observed,

place 2 scales to measure the height (the first to be placed vertically from the sternal angle and the second to be placed horizontally from the top of the jugular venous column. If raised (more than 3 cm above sternal angle), ask the patient to take a deep breath to examine for Kussmaul sign (rising jugular venous pressure (JVP) with inspiration).

- * Feel the carotid pulse and Chest: Shape (pectus excavatum or carinatum), any scars (Example: midline sternotomy for coronary artery bypass graft surgery, left axillary scar for mitral valve replacement) or pacemaker boxes.

6. Palpate

- a. Feel the apex beat (usually in the 5th intercostal space in the mid-clavicular line. The angle of Louis marks the 2nd intercostal space).
- b. Palpate for thrills and heaves: use a Z-shaped pattern for examination.
- c. Make sure you look at the patient for any tenderness or concern to be addressed.

7. Percuss and Auscultate

a. Auscultation

- * Listen in inspiration to accentuate right sided murmurs
- * Listen in expiration to accentuate left sided murmurs
- * At the apex (mitral area)
 - Using the bell, ask the patient to roll to the left side while listening (Mitral Stenosis)
 - Using the diaphragm (Mitral Regurgitation)
- * Left sternal edge in the 4th intercostal space (tricuspid area)
- * Left sternal edge in the 2nd intercostal space (pulmonary area)
- * Right sternal edge in the 2nd intercostal space (aortic area). Ask the patient to lean forward (Aortic Regurgitation). Listen over the carotid for radiation (Aortic Stenosis).

- b. Percuss and listen to the lung bases for any sign of pleural effusion (right ventricular failure) and pulmonary edema.

8. Palpate for sacral edema that is indicative of right heart failure

9. Check the abdomen:

- a. Palpate for Abdominal Aortic Aneurysm

- b. Palpate the liver. Note if its pulsatile in case of tricuspid regurgitation, enlarged in case of right sided heart failure.
 - c. Hepatojugular reflex (only if JVP is high): Ask the patient to breath from his or her mouth while you apply some pressure on the liver and sustain it for 10 seconds. A sustained elevation of JVP for 10 seconds is indicative of tricuspid regurgitation, heart failure due to other non-valvular causes, constrictive pericarditis, cardiac tamponade, and inferior vena cava obstruction.
10. Check the lower limbs
 - a. Palpate for peripheral pulses: check femoral (radio-femoral delay), popliteal, posterior tibial, dorsalis pedis
 - b. Examine for ankle edema
11. Give feedback and thank the patient
12. Ensure systematic approach

Respiratory System examination

introduce yourself, ask for his or her name, and take permission to examine

wash your hands

Explain what you are going to do

Examine the body parts to be examined appropriately and take permission to examine the patient (expose chest and abdomen)

Examination

check vital signs including oxygen saturation, and respiratory rate
note its rate, rhythm, depth and type of respiration

Stand at the end of the bed: comment on general appearance, comfortable at rest, no distress, any audible wheeze or stridor, any bedside nebulizer, ventilator, oxygen supply beside the patient.

Hands: comment on clubbing, peripheral cyanosis, nicotine stain in smokers, palmar erythema, tremors [flapping (Carbondioxide retention) or fine (Beta2- agonist overuse)]

Face: comment on pallor, nasal flaring, air hunger, pink puffer, miosis, ptosis, signs of Horner Syndrome (miosis, ptosis, anhydrosis). Bluish central cyanosis.

Check for raised jugular venous pressure.

Imb and sacrum: palpate for presence of edema.

Examination of thorax: comment on symmetry, deformities of the chest, haematomas, scars (lateral thoracic or central)

Respiratory movements: normally in a male its abdominothoracic, in females the thoracoabdominal

Use of accessory muscle

Examination of neck: (deviated) and enlarged lymph nodes
(Lhermitte-Jespé costochondritis)

Check for comment on any displacement)

Check expansion: chest expansion at three levels anteriorly and laterally (supraclavicular, mammary, mammary and inframammary). It is reduced in case of pneumonectomy, pneumonia, pleural effusion,

pneumothorax.

e. Tactile vocal fremitus [by the ulnar surface of the hand while the patient says 99]: check tactile vocal fremitus at three levels anteriorly and posteriorly. It is decreased in case of pneumonia or pleural effusion.

8. Percuss

- Anteriorly: At the apex of the lung, clavicle, supramammary, mammary, inframammary areas, axilla and liver (Will be pushed below costal margin in case of lower lobe pneumonia)
- Posteriorly: at the apex of the lung, intrascapular and infrascapular areas
- Comment on percussion as follows:
 - Resonance indicating normal percussion note
 - Dullness indicating consolidation (pneumonia)
 - Stony dullness indicating pleural effusion
 - Hyper resonance indicating pneumothorax

9. Auscultate

- Air entry: good air entry in normal exam, decreased in case of consolidation, pleural effusion and pneumothorax
- Type of breathing:
 - Vesicular which is normal (inspiratory phase followed by a short expiratory phase, low pitched and soft).
 - Bronchial breathing (usually localized) in case of consolidation (a gap between two phases is noted and expiration is prolonged), high pitched and loud.
 - Prolonged expiration: asthma, emphysema, Chronic obstructive pulmonary disease (COPD)
- Intensity: decreased air entry with pneumonia, pneumothorax
- Added sound: wheezes, rhonchi, pleural rub, fine and coarse crackles
- Vocal resonance or bronchophony: by asking patient to say 99 while auscultating the lung
 - Normal test will be louder clearer sounds
 - Positive test will be muffled sounds
- Egophony: by asking the patient to say long "E" vowel sound
 - Normal test will be long E sound
 - Positive test E to A transition
- A normal chest auscultation denotes good air entry, vesicular breathing, with normal intensity bilaterally and no added sounds

10. Ask the patient to sit forward and repeat inspection, palpation, percussion and auscultation over the back.
11. Give feedback and thank the patient.
12. Ensure systematic approach.

Abdominal Examination

Remember that abdominal examination is the only exception for the general rule. It goes: inspection, auscultation, palpation and percussion (to avoid disturbing the bowel sounds by palpation and percussion)

1. Introduce yourself, ask for his name, take permission to examine
2. Wash your hands and maintain privacy
3. Explain what you are going to do
4. Expose the body parts to be examined appropriately and take permission to examine the patient (ideally from nipple to the knee)
5. General examination
 - a. Vital signs.
 - b. General appearance: comfortable or in pain, connection to devices, gastric tubes, jaundice, pigmentation (hemochromatosis and Addison), body built (underweight (malignancy), obese (fatty liver), hydration status, mental status (hepatic encephalopathy, fulminant hepatitis).
 - c. Hands:
 - Nails: leukonychia (chronic liver disease), koilonychia (iron deficiency anemia), clubbing (cirrhosis, inflammatory bowel disease).
 - Palms: palmar erythema (chronic liver disease), anemia, Dupuytren's contracture (Alcoholism), flapping tremors (liver failure).
 - Arms: bruising (clotting abnormality in liver damage), scratch marks.
 - (Obstructive jaundice, biliary cirrhosis), spider nevi (cirrhosis, alcohol abuse), atrial-venous fistula.
 - d. Eyes: sclera; pallor, jaundice, kaiser Fleischer (brownish greenish ring (copper deposit)), xanthelasma.
 - e. Face: Parotid enlargement (parotiditis, mumps)
 - f. Mouth:
 - Teeth and breath (halitosis, sweet smell (fetor hepaticus))
 - Tongue: leukoplakia, glossitis, macroglossia
 - Angular stomatitis, aphthous ulcers, oral thrush
 - g. Lower limb: check for oedema

6. Inspect

- a. Skin: scars (site and length), rashes, Caput medusa, venous dilatation
- b. Contour of the central abdomen: (flat, rounded, protuberant, distended and scaphoid)
- c. Symmetry
- d. Visible pulsation (particularly aortic pulsation in the upper abdomen: thin patients or aortic aneurysm) or visible peristalsis (intestinal obstruction)
- e. Discoloration in flanks: Grey Turner sign in acute pancreatitis.
- f. Ask patient to cough and check for bulging at hernial orifices.

7. Auscultate

- a. Bowel sound: at a point midway between the umbilicus and the anterior superior iliac spine. Describe its character (high pitched, tinkling, rushes, rumbling).
- b. Aortic bruits: at the mid epigastric area.
- c. Renal arteries bruits: at 2 centimeter left and right from the umbilicus.
- d. Femoral arteries bruits: at 2 centimeter lateral to inguinal ligament, midclavicular line palpate.
- e. Superficial palpation of all quadrants (tenderness, muscular spasm or rigidity).
- f. Deep palpation (Tenderness, rebound tenderness, masses, pulsations (abdominal aortic aneurysm), palpable bowel loops or movement.
- g. Kidney Ballottement.
- h. Organomegaly (liver, and spleen), measure liver span.
- i. Note: remember to check costophrenic tenderness when patient is in the sitting position.

8. Percuss

- a. All over the abdomen: tender in case of peritonitis.
- b. Liver (check the span as well, normally 10-12 centimeter).
- c. Spleen.
- d. Urinary Bladder (full bladder is dull) from symphysis pubis upward.
- e. Shifting dullness and fluids thrills (fluid wave test) for ascites.

9. Special tests and signs (include a brief description if possible)

- a. For obese patients: Scratch test: to identify the liver span especially when palpation is difficult.

- b. For cholecystitis: Murphy's sign (ask the patient to breathe out, then place your hand below the right costal margin at the mid-clavicular line. Then ask the patient to breathe in. A positive response will be if the patient stops breathing or winces with a 'catch' in breath)
- c. For appendicitis:
 - * Rebound tenderness: at the McBurney's point (a point 2/3 from the umbilicus and 1/3 from the anterior superior iliac spine on a line joining them)
 - * Rovsing's sign (deep palpation of left iliac fossa (LIF) will cause pain in the right iliac fossa (RIF))
 - * Psoas sign: (hyperextension of hip while lying on the left lateral position or raising the hip against resistance will cause pain in RIF)
 - * Obturator sign: (Flexion of the hip and knee, followed by internal rotation of hip will cause pain in the in RIF)
10. At the end of examination: check for hernias, genitalia and per-rectal (PR) exam
11. Give feedback and thank the patient
12. Ensure systematic approach

Neck Examination

1. Introduce yourself, wash your hands and expose examined body parts appropriately.
2. Explain what you are going to do and ensure systematic approach.
3. Inspect (from front and back).
 - a. Skin (redness, scar, discoloration).
 - b. Asymmetry: masses, torticollis (twisting of the neck to one side that results in abnormal carriage of the head), or bone deformity.
 - c. Muscle wasting.
4. Palpate
 - a. Temperature
 - b. Tenderness (check by thumbs) over the clavicle, cervical rib (an extra rib that forms above the normal first rib, growing from the base of the neck just above the collarbone), cervical spines, para-spinous muscles, supraclavicular fossa.
 - c. Thyroid.
5. Check Range of Motion (Active, passive and resisted):
 - a. Forward flexion, Extension, lateral flexion (side bending) and lateral rotation (70 degrees each way)(twisting).
6. Special tests (check for neural or vascular compression sequel):
 - a. Check hands: pulses and capillary refill (any ischemia), muscle wasting, sensation over: hypothenar muscle
 - b. Check power distally in the limb.
 - Arms: Abduction(C5), Adduction(C6,7,8)
 - Elbow: flexion(C6), extension(C7)
 - Hands: ask patient to make a fist and squeeze your fingers(C8)
 - c. Atlanto-axial compression test or Spurling's test: apply an axial load to the top of the head while the neck is twisted (radicular pain in the shoulder and arm probably means cervical root irritation).
 - d. Forward flexion test: forward flex the neck with the head turned toward the side (radicular pain in the arm probably means disc impingement on a cervical nerve root).
 - e. Auscultate carotid artery (Bruit).

- f. Adson's maneuver: locate the radial pulse. Have the patient take a deep breath, extend neck, and rotate head toward the painful shoulder (positive if the radial pulse diminishes and probably means thoracic outlet syndrome).
- g. Reflexes: Biceps (C8) Triceps (C7) Brachioradialis (C6).

7. Check one joint above and one joint below (shoulder).
8. Give feedback and thank the patient.
9. Ensure Systematic approach.

Back Examination

1. Introduce yourself.
2. Wash your hands and maintain privacy.
3. Explain what you are going to do.
4. Expose the body parts to be examined appropriately and take permission to examine the patient
5. Inspect:
 - a. Gait (walking without shoes), Check tip toe walking (S1) and heel walk (L5).
 - b. Posture (look from the patient's:
 - * Back for scoliosis (thoraco-lumbar)
 - + Sides for kyphosis (thoracic) and lordosis (cervical and lumbar)
 - c. Check shoulder and pelvic levels (should be symmetrical).
 - d. Skin (erythema, swelling, scars, hair, fat pads "lipoma")
 - e. Muscle Wasting (leg or gluteal).
6. Palpate:
 - a. Temperature bilaterally.
 - b. Tenderness (using your thumb): over spinous process, paraspinal muscles, paravertebral area, sacroiliac joint, anterior and posterior iliac spines.
 - c. Masses or muscle spasm.
7. Percuss: lightly on the back for any tenderness using a fist
8. Check Range of Motion:
 - a. Flexion: bending forward (if limited indicates disc pathology).
 - b. Extension: bending backward (if limited indicates spinal stenosis, spondylolisthesis or usually facet pain).
 - c. Lateral rotation: bending to both sides (if limited indicates muscular pathology)
 - d. Rotation: fix the hip and ask the patient to turn to left and right (if limited indicates muscular pathology)

3. Special tests:

- a. Straight leg raising test (SLR): (positive if shooting sciatica pain between 30 to 70 degrees: pain radiate below the knee that sometimes associated with numbness and paresthesia indicating herniated disc).
- b. Bragards test (used to confirm a positive straight leg raising (SLR) test): passively lower the leg an inch from the level at which the patient felt pain with SLR test and dorsiflex the foot (positive if shooting sciatica pain reoccur also indicates herniated disc).
- c. Contralateral leg raising test: elevating the other leg causes back pain on the involved side.
- d. Bowstring sign or tibial stretch sign: passively bend the patient's knee and press at the popliteal fossa (positive if sciatica pain is elicited and indicates herniated disc)
- e. Figure four or FABER test: flexion, abduction, and external Rotation at the sacroiliac joint (positive if pain is produced at the:
 - Sacroiliac (SI) joint indicates SI joint dysfunction or Sacroiliitis.
 - Groin indicates Iliopsoas strain, Iliopsoas bursitis or Intra-articular hip disorder (osteoarthritis or labral tear).
 - Posterior hip indicates posterior hip impingement.
- f. Femoral stretch sign: extend the hip while patient lying prone or on the side (positive if ipsilateral pain elicited and indicates involvement of L3-L4 nerve root).

10. Neurological examination:

- a. Sensation of the foot: Medial side (L4), Dorsum (L5) and Lateral side (S1).
- b. Power: dorsiflexion (L4-L5) and plantar flexion (S1) the foot.
- c. Reflexes: knee jerk (L3-L4), ankle jerk (S1-S2), and ankle clonus: sudden passive ankle dorsiflexion which result in repetitive uncontrolled ankle twitches (Indicates upper motor neuron lesion)

11. End your exam with:

- a. Quick palpation and range of motion checking of neck and hip
- b. Abdominal palpitation to exclude Abdominal Aortic Aneurysm
- c. Digital rectal exam to check for anal sphincter tone.

12. Give feedback and thank the patient.

13. Ensure systematic approach

Shoulder Examination

Introduce yourself

Wash your hands

Explain why and what you are going to do and take permission to examine the patient.

Examine the body parts to be examined appropriately and take permission to examine the patient (Neck, shoulders, arms and the back)

- 1. **Inspection:** any swelling, posture, muscle wasting, asymmetry).
 - a) Anteriorly: sternoclavicular joint, clavicle, acromioclavicular joint, deltoid.
 - b) laterally: swelling of joint.
 - c) In above: swelling, clavicle deformity, supraclavicular fossa.
 - d) Behind: scapular winging (ask the patient to push-up against a wall = becomes prominent).

Examine patient

- 1. **Anteriorly:** sternoclavicular junction, clavicle, acromioclavicular joint, deltoid, coracoid process.
- 2. **Laterally:** bicipital tendon, upper humeral shaft, and gleno-humeral joint.
- 3. **Posteriorly:** supraspinatus, spine of scapula, infraspinatus.

2. **Range of Motion (active then passive):** Flexion, extension, abduction, adduction, internal and external rotation (Apply scratch test)

3. **Grade strength or power**

- 1. **Scratch test:** provide downward resistance against a flexed shoulder at 90° degree with supinated arm (test biceps).
- 2. **Scratch internal rotation:** (test subscapularis)
- 3. **Scratch external rotation:** (test infraspinatus and teres minor)
- 4. **Scratch abduction:** (test supraspinatus and deltoid)
- 5. **Strength test:** position the patient with shoulders elevated at 90° degree in scapular plane and full internal rotation, with thumbs downwards. Apply a downward force just proximal to the patient's wrist while the patient resists. (Test supraspinatus)

9. Special tests

a. Impingement tests

- Cross over test: extreme active adduction of the arm across the front of the chest (for tendon impingement at acromioclavicular joint)
- Neer's test: passive forced forward flexion of pronated arm (for rotator cuff tendon impingement).
- Hawkins-Kennedy test: passive shoulder forward flexion and elbow flexion at 90 degree followed by medial rotation of the shoulder. Examiner grasps patient's elbow with one hand and their wrist with the other. Examiner passively internally rotates and horizontally adducts the shoulder (for supraspinatus tendon impingement).

b. Joint instability testing

- Anterior instability: perform with shoulder and elbow at 90 degree, apply an anterior force to the posterior shoulder pushing the humeral head anteriorly. A stable joint will not move.
- Posterior instability: perform with shoulder and elbow at 90 degree, apply a posterior force to the anterior shoulder pushing the humeral head posteriorly. A stable joint will not move.
- Inferior instability (Sulcus sign): performed with arms hanging at side. Downward pull of the arm causes a sulcus to form between the acromion and the humeral head if the patient has inferior instability.

c. Labrum Grind test: performed with abducted shoulder at 120° and flexed elbow at 90 degree. The humeral head is compressed into the glenoid while internally and externally rotating the humerus (pain or clunk indicates labrum injury).

10. Check one joint above (neck for cervical spine) and one joint below (elbow). A quick neck exam includes checking for range of motion and Spurling's test.
11. Give feedback and thank the patient.
12. Ensure systematic approach.

Elbow Examination

Introduce yourself.

Wash your hands.

Explain why and what you are going to do and take permission for examining the patient.

Point the body parts to be examined appropriately and take permission to examine the patient (Neck, shoulders, arms and the back).

Examine (while elbow is flexed at 90 degree and extended)

Skin changes (erythema, rash, scars over the medial condyles for ulnar nerve injury, psoriatic plaques), swellings (adaptive hypertrophy to dominant elbow of throwers, joint effusion, rheumatoid nodules, soft tissue olecranon bursitis), bone deformity, muscle wasting.

Carrying Angle: angle formed by upper and lower arm in anatomical position (normally 5-10 degrees in males, 10-15 degrees in females and may increase in athletes). Abnormal angle is indicative of elbow instability or malunion.

Examine (when elbow is flexed at 90 degree and extended)

Temperature, swellings or masses

Crepitus: anterior aspect of joint, olecranon process, lateral epicondyle, medial epicondyle and the ulnar nerve behind it

Examine movements:

Active: Flexion/extension, pronation (palm down) and supination (palm up)

Passive: same movements [check for crepitus]

Assess strength and power

Resisted elbow extension (test triceps strength)

Resisted elbow flexion (test biceps strength)

Assess reflexes:

Brachioradialis

Test for Tinel's test: actively flex elbow, then pronate and extend the wrist while the examiner resists at the hand

- + [pain indicates lateral epicondylitis]
 - + **Golfer elbow test**: actively flex elbow, then supinate and flex the wrist [pain indicates medial epicondylitis]

b. Elbow instability:

- + Remember: the medial collateral ligament is injured much more commonly than the lateral.
- + Displacement or Stress tests: perform with externally rotated shoulder and elbow flexed at 20-30 degrees:
 - + Valgus displacement or stress test: place your first palm over the lateral elbow and the second above the medial wrist. Create an abduction or valgus stress at the distal forearm [pain or laxity indicates medial collateral ligament (MCL) injury].
 - + Varus displacement or stress test: place your first palm over the medial elbow and the second above the lateral wrist. Create an adduction or varus stress at the distal forearm [pain or laxity indicates lateral collateral ligaments injury]
- + Milking maneuver: bend the affected elbow at 90 degrees along with supination and thumb extension. Move the opposite arm under the involved elbow in order for the patient to grasp the thumb of the affected limb with the opposite hand. Instruct the patient to pull laterally on the thumb creating valgus stress [pain indicates medial collateral ligaments injury]

10. Reflexes: biceps (C5), Brachioradialis (C6), and Triceps (C7,8)

11. Check one joint above (shoulder) and one joint below (wrist). State that it can be referred pain from the cervical spine. A quick neck exam includes checking for range of motion and Spurling's test.

12. Give feedback and thank the patient.

13. Ensure systematic approach (do not forget to check examine the joint bilaterally).

Wrist & Hand Examination

Things to remember:

- Median nerve entrapment causes wasting of the thenar muscles, loss of sensation over the medial 3.5 fingers, weak thumb abductors and wrist flexors, as well as positive Phalen's, Tinel's and Flick tests.
- Ulnar nerve injury causes claw hand, hypothenar wasting, loss of sensation over the lateral 1.5 fingers, weak small finger's abductors and interossei, as well as positive Forman's and Indian Salaam tests.
- Radial Nerve injury cause drop wrist because of loss of wrist extensors and thumb abductors
- DeQuervain tenosynovitis causes tenderness over the abductor pollicis longus and extensor pollicis brevis tendons, as well as a positive Finkelstein test.

1. Introduce yourself.
2. Wash your hands.
3. Take permission to examine the patient and explain what you are going to do
4. Expose examined body parts appropriately (hands up to elbows).
5. Inspect (bilaterally):
 - a. Skin (rash, erythema, palmar pallor)
 - b. Nails (nail pitting in Psoriasis, nail bed pallor)
 - c. Dorsal surface for:
 - Bone deformity:
 - Ulnar or radial deviation
 - Prominent ulnar styloid
 - Swan Neck deformity (Proximal Interphalangeal joint hyperextension & Distal Interphalangeal joint hyperflexion)
 - Boutonniere deformity (Proximal Interphalangeal joint hyperflexion and Distal Interphalangeal joint hyperextension)
 - Z thumb deformity (Metacarpophalangeal joint hyperflexion and Interphalangeal joint hyperextension)

- Mallet (also called as finger drop) or Jersey fingers
- Claw hand (evident on resting the hand on a hard surface in case of ulnar nerve injury. Also called Table Top test)
- Nodes: Heberden (Distal Interphalangeal joint) or Bouchard (Proximal Interphalangeal joint)
- Joints for any effusion: look for loss of spaces between the knuckles when patient put his hand into a fist
- Drop wrist (evident on hand stretching in case of radial nerve injury)

d. Palmar surface for:

- Muscle wasting (thenar in carpal tunnel syndrome, an Rhypothenar in ulnar tunnel syndrome)
- Dupuytren's contracture: fixed flexion contracture of the hand
- Swelling (mass, or ganglion cyst). If any, comment on the location, size, color, soft or hard, mobile or fixed, any tenderness or fluctuation, relation to surrounding tissue (subcutaneous or intratendon or intrasheath- by checking whether it appears or disappears with flexing and extending the wrist).
- Scars: at the wrist for carpal tunnel release

e. Elbow for:

- Skin: psoriatic plaque, eczematous rash, or rheumatoid nodules
- Scars at the medial epicondyles for ulnar nerve release surgeries

6. Palpate

- a. Temperature (increase in Rheumatoid Arthritis)
- b. Any sweating (in autonomic nerve dysfunction)
- c. Pulses (radial, and ulnar)
- d. Capillary refill
- e. Any tenderness over:
 - Metacarpophalangeal and interphalangeal joints
 - Carpal bones
 - Ulnar and radial styloid processes (to check for Colles' fracture)
 - Snuff box (to check for scaphoid fracture)
 - Abductor pollicis longus and extensor pollicis brevis tendons (for DeQuervain's tenosynovitis)

f. **Sensation:**

- Lateral three and half fingers (Median nerve)
- Medial one and half fingers (ulnar nerve)
- Snuff box (Radial nerve)

7. **Check Range of Motion (active, passive and resisted for power)**

- a. **Wrist:**
 - Flexion and extension (dorsiflexion and palmar flexion)
 - Pronation & supination
 - Lateral flexion (ulnar and radial deviation)
- b. **Fingers:**
 - Flexion at MPJ & extension of IPJ (1st and 2nd Lumbricals muscle supplied by Median nerve while 3rd and 4th by Ulnar nerve)
 - Adduction and abduction (Interosseous muscles Supplied by Ulnar nerve)
 - Ask the patient to hold a paper between 3rd and 4th fingers against your resistance (interosseous muscle)
- c. **Thumb** [on passive assessment look for clasp sign (flexor longus muscle- median nerve)]
 - Extension (Stick your thumb out to the side)
 - Flexion (Flexor longus muscle supplied by Median nerve)
 - Abduction (Point your thumb up to the ceiling to test Abductors supplied by Median nerve)
 - Adduction (Collect your thumb in your palm)
 - Opposition (Oppose the tip of your thumb to the tip of your little finger)
 - **Functionality:**
 - Power grip (patient make a fist and try to squeeze your fingers and try to open the fist against you)
 - Pincer grip (try to break the pinch between his thumb and first finger to test Oponens pollicis muscle supplied by Median nerve)
 - Buttoning and un-buttoning shirt
 - Holding pen and writing name

8. **Special tests (include a brief description if possible)**

- a. **Carpal tunnel Syndrome (to check for median nerve)**
 - **Phalen's test:** ask the patient to flex his or her wrist maximally for 1 min, positive if numbness develop over the

medial 3.5 fingers

- Tinel's test: tap on the volar side of the wrist over the median nerve, positive if numbness develops over the medial 3.5 fingers
- Flick test: command: "shake your hand", positive if the test relieves the numbness (has highest sensitivity and specificity)

b. Ulnar tunnel Syndrome (to check for Ulnar nerve):

- Indian salaam test: ask the patient to extend the wrist at 90 degree for 1 min, positive if numbness develops over the lateral 1.5 fingers)
- Forman's test: ask the patient to hold a paper between his thumb & index finger against your resistance (test for adductor pollicis longus muscle, positive if not able to maintain pinch or flexes the thumb to compensate)

c. DeQuervain tenosynovitis (tenosynovitis of the sheath that surrounds both abductor pollicis longus and extensor pollicis brevis):

- Finkelstein test: command the patient to "adduct the thumb, make a fist, and deviate the wrist ulnarly, positive test results in pain along the sheath of abductor pollicis longus

d. Testing the ligament and tendon injury (in trauma cases):

- Digital collateral ligament: apply varus and valgus stress to the injured fingers. (Laxity indicates tear).
- Digital DIP extensor & flexor tendons: stabilize the PIP joint and ask the patient to flex and extend the DIP joint. Classify defects as follow:
 - Inability to extend the finger indicates extensor tendon rupture (mallet finger)
 - Inability to flex the finger indicates flexor tendon rupture (jersey finger).
- Ulnar collateral ligament of the thumb: apply extension stress to the thumb (laxity or weakness indicates Kien's thumb).

9. Check one joint or joint above (elbow).

10. State that it can be referred pain from the cervical spine. A quick neck exam includes checking for range of motion and Spurling's test.

11. Give feedback of your findings, cover the patient
12. Thank the patient
13. Maintain a systematic approach (do not forget to check and examine the joint bilaterally)

Hip Examination

1. Introduce yourself
2. Wash your hands
3. Explain why and what you are going to do and take permission to examine the patient
4. Expose the body parts to be examined appropriately and take permission to examine the patient (ideally the back and lower extremities)
5. Inspect:
 - a. Observe:
 - From front: posture (symmetry of legs and pelvis, any pelvic tilting), muscle wasting, rotational deformity
 - From side: scars, lumbar lordosis
 - From behind: scoliosis, gluteal muscle wasting and scars
 - b. Assess gait (observe from front and back) noting any limp:
 - Antalgic gait: a limp adopted in an effort to avoid pain by shortening the stance phase of the gait on the injured side
 - Trendelenburg gait: a limp in compensation occurs by leaning the torso toward the involved side during stance phase on the affected extremity.
6. Palpate (look at the face of the patient in case of tenderness):
 - a. Temperature
 - b. Joint effusion
 - c. Tenderness: anterior joint line (osteoarthritis, fracture or avascular necrosis), anterior superior iliac spine (ASIS) for (Sartorius attachment), anterior inferior iliac spine (AIIS) for rectus femoris attachment, greater trochanter (bursitis), iliobial band, posterior superior iliac spine (PSIS), sacroiliac joint, gluteus muscle, ischial tuberosity (hamstring attachment), hamstring muscle.
7. Check Range of Motion (Active and Passive) and power (resisted range of motion)
 - a. Abduction and Adduction
 - b. Internal rotation: flex knee to 90 degrees in sitting position and move foot away from midline
 - c. External rotation: flex knee to 90 degrees in sitting position and

move foot towards midline

- d. Flexion (up to 90 degree if knee extended and up to 120 degree if knee flexed)
- e. Extension (lift leg off table while in prone position)

8. Check muscle strength and power

- a. Resist extension (for gluteus maximus and hamstrings)
- b. Resist flexion (for illopsoas, rectus femoris and sartorius)
- c. Resist adduction (for gluteus medius and minimus)
- d. Resist abduction (for adductors longus, brevis, magnus and gracilis)

9. Evaluate sensation:

- a. Meralgia Parasthetica: numbness in the lateral thigh distally. Is common in pregnancy (enervated by Lateral Femoral Cutaneous Nerve).
- b. Medial aspect of the thigh and knee (Obturator nerve)

10. Special tests

- a. Leg length measurement: from the ASIS until the medial malleolus (look for discrepancy)
- b. Log roll test: gently rolling thigh internally and externally (pain indicates fracture, infection or synovitis). Most sensitive test for hip pathology.
- c. Trendelenburg's test: ask the patient to stand on the affected leg then ask him to lift the other leg off the ground, if the pelvis drops towards contralateral side, the test is considered positive.
- d. Hop test: ask the patient to hop on each leg in turn (positive if pain is reproduced in the groin indicating femoral neck stress fracture).
- e. FABER or PATRICK test for illiotibial band stretch: performed by crossing the ankle over the front of contralateral knee and then forcing the knee of the involved extremity down on the table to make a figure 4 (pain indicates SI joint pathology).
- f. Ober's test: ask the patient to lie on the side with the upper knee flexed at 90 degree. Measure the distance of the flexed knee from the table. Inability to bring the knee down to the table suggests illiotibial band tightness.
11. Check one joint above and one joint below: Knee and back (lumbosacral spine). A quick back exam includes checking for range of motion and straight leg rise test.

12. Cover the patient and give feedback
13. Thank the patient
14. Ensure systematic approach

special res both legs

① stand in back with flexed legs
allow to straight one by one
& allow to stand, hold pelvis
to stand on one leg.

② allow to stand in one length.

③ measure the length.

Knee Examination

1. Introduce yourself.
2. Wash your hands and maintain privacy.
3. Explain what you are going to do and take permission to examine the patient
4. Expose the body parts to be examined (mid-thigh down to the foot)
5. Inspect
 - a. Both knees for symmetry, shape and size of patella.
 - b. Skin (erythema, swelling, scars, deformity, bruising).
 - c. Quadriceps muscle wasting: measures the quads bulk with measuring tape 20 cm above the tibial tuberosity.
 - d. Gait
6. Palpate
 - a. Temperature bilaterally and all sides.
 - b. Tenderness: Position the knee in slight flexion and check for tenderness over:
 - Tibial tubercle indicating Osgood Schlatter disease
 - Patellar tendon indicating tendinitis
 - Patellar plate indicating pre-patellar bursitis
 - Medial knee joint line indicating meniscal injury
 - Medical Collateral ligament insertion point indicating pes-anserine bursitis.
 - Lateral Collateral ligament and iliotibial band insertion point indicating iliotibial band syndrome.
7. Effusion (check while patient is supine with extended knee)
 - a. Fluctuation test (ice cube test): tap over the patella by one finger (positive if patella moves up indicating large effusion)
 - b. Patellar tap or ballottement sign: squeeze the suprapatellar pouch with the index finger and the thumb starting 15 cm above the knee to the level of the upper border of the patella. Using the tips of the fingers of the free hand, push the patella with force downwards (positive if patellar ballottement indicates moderate effusion).
 - c. Milking or Bulge sign, cross-fluctuation sign, or fluid displacement test: repeatedly milk the effusion up into the suprapatellar area by

moving the hand in an upward motion along the medial patellar margin then press behind patellar lateral margin (positive if swelling reappears indicating minor effusion).

8. Check Range of Motion (Flexion and extension):

Normal range of motion is 130 to 140 degree in flexion and 0 degree in extension

- Passive (look for limitations and crepitus).
- Active.
- Against resistance (for power).

9. Special tests

a. Medial Collateral Ligament (MCL):

- Valgus stress test: with the knee flexed at 30° (to isolate the collateral ligament), push medially against the lateral surface of the knee with one hand and pull laterally at the ankle with the other hand (pain indicates MCL tear)

b. Lateral Collateral Ligament (LCL):

- Varus stress test: with the knee flexed at 30 degrees, push laterally against the medial surface of the knee with one hand and pull medially at the ankle with the other hand (pain indicates LCL tear)

c. Anterior Cruciate Ligament (ACL):

- Lachman test (most definitive test): flex knee at 20 degrees, apply anterior directed force on the tibia while stabilizing the thigh.
- Anterior drawer test: flex knee at 90°, place the examiner's thumbs on the medial and lateral joint lines and place the fingers on the hamstring insertions. Pull tibia forward (positive if tibia slides forward indicating ACL tear).

d. Posterior Cruciate Ligament (PCL):

- Posterior drawer test: position patient and examiner's hand as in anterior drawer test. Push tibia backward (positive if tibia slides backward indicating PCL tear).

e. Menisci:

- McMurray test: start with a flexed knee and while extending it apply:

- Varus stress and internal rotation (pain or click indicate lateral meniscal tear).

- Valgus stress and external rotation (pain or click indicate medial meniscal tear).

Knee flexed with varus of varus

While flexed extended do varus

f. Patellae:

- Patellar Apprehension test: while the patient is lying supine with extended knees, push the patella medially and laterally [subluxation indicates patellar dislocation].
- Patellar grind test: while the patient is lying supine with extended knees, pushes the patella posteriorly into the trochlear groove of the femur. Grind back and forth (pain indicates patellofemoral syndrome)

g. Popliteal fossa (while patient in prone position):

- Inspect: any mass, swelling (baker cyst) or erythema.
- Palpate: for tenderness, popliteal pulsation and any mass or swelling (measure the circumference bilaterally).

10. Check one joint above "hip" and one joint below "ankle". State that it can be referred pain from the lumbosacral spine. A quick back exam includes checking for range of motion and straight leg rise test.

11. Give feedback and thank the patient.

12. Ensure systematic approach (do not forget to examine the joint bilaterally)

Ankle Examination

1. Introduce yourself
2. Wash your hands
3. Explain why and what you are going to do and take permission to examine the patient
4. Expose ankles and feet up to knees and maintain privacy
5. Inspect
 - a. The foot: from front, back, lateral and plantar aspects (while patient is lying). Look for any scars (at the big toe or tendon achilles), deformity (hallux valgus, Charcot joint), foot shape and arch when standing, any flat feet, muscle wasting, swelling, corns or calluses.
 - b. The Gait. Ask the patient to stand on toes, heel, outer and inner border of foot.
 - c. Footwear: look for abnormal foot patterns
6. Palpate
 - a. Temperature
 - b. Tenderness at:
 - Lower leg.
 - Ankle -medially: medial malleolus, posterior tibiotalar, tibiocalcaneal, tibionavicular, deltoid and calcaneonavicular ligaments.
 - Ankle - laterally: lateral malleolus, anterior talofibular ligament (ATFL), peroneal longus tendon, calcaneofibular ligament (CFL), and posterior talofibular ligament (PTFL)
 - Ankle - posteriorly: Achilles tendon (tendonitis), calcaneus and tibialis posterior tendon.
 - Foot: base of 5th metatarsal bone, mid foot bones [especially the navicular bone].
 - c. Squeeze forefoot, check capillary refill and sensation over dorsum of the foot.
 - d. Pulses (dorsalis pedis, posterior tibialis)
7. Check Range of Motion:
 - a. Active: Dorsiflexion, plantar flexion, eversion and inversion

- b. Passive (check for crepitations)
8. Check muscle strength or power:
 - a. Resist eversion (peroneal longus and brevis) - L4
 - b. Resist dorsiflexion (tibialis anterior) - L4, 5
 - c. Resist inversion (tibialis anterior and posterior) - L5 or S1
 - d. Resist planter-flexion (gastrocnemius, peroneal longus, tibialis posterior) - S1, 2
9. Special tests
 - a. Tinel test for tarsal tunnel syndrome: tap repeatedly on the tibial nerve behind the medial malleolus to reproduce pain and paresthesia along the course of the nerve.
 - b. Squeeze test: while patient is sitting, squeeze the proximal tibia and fibula together (distal discomfort indicates tibiofibular ligament injury, aka syndesmosis sprain)
 - c. Anterior drawer test: stabilize the lower leg with one hand while cupping the heel with the other, then pulling forward on the calcaneus or talus complex (positive if lax or slides forward indicating ATFL ligament tear)
 - d. Talar tilt test: stabilize the lower leg with one hand while cupping the heel with the other, then invert the ankle joint. Laxity when compared to the opposite uninvolved side suggests CFL ligament tear, while pain suggests CFL ligament injury.
 - e. Thompson sign: while patient is prone, squeeze at the base of the calf muscle anticipating an ankle planter-flexion (lack of the planter flexion indicates Achilles tendon rupture)
10. Check the ankle reflex (S1, S2)
11. Check one joint above (knee) and one joint below (foot). State that it can be referred pain from the lumbosacral spine. A quick back exam includes checking for range of motion and straight leg rise test.
12. Give feedback and thank the patient.
13. Ensure systematic approach (do not forget to examine the joint bilaterally).

Examining a Diabetic Patient

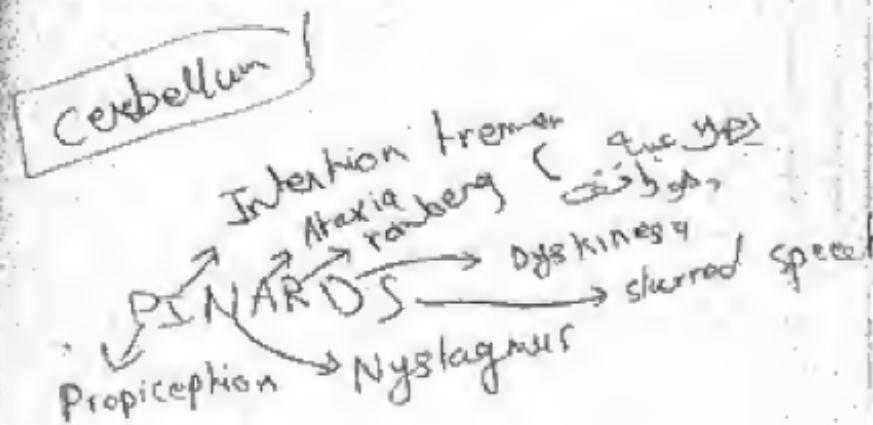
1. Introduce yourself, acknowledge (annual exam looking for organ damage and secondary causes of diabetes mellitus), and wash your hands.
2. Explain what you are going to do and take permission for examining the patient.
3. Expose the body parts to be examined appropriately.
4. Inspect: comment on obesity, underweight, moon-face, acromegalic facies, dehydration, gait, foot wear *BMS*
5. Measure:
 - a. Biometrics (weight, height, body mass index), and vitals (blood pressure, pulse rate)
 - b. Capillary blood glucose
6. Examine Eyes:
 - a. Xanthelasma, arcus senilis, cataract, rubrosis irides (neovascularization of the iris)
 - b. Visual acuity (check roughly with finger count or hand waving and mention that it ought to be checked with Snellen's Chart)
 - c. Visual field with confrontation
 - d. Pupillary reaction
 - e. Red reflex
 - f. III, IV, VI Cranial nerves
 - g. Fundoscopy
7. Examine Ears: otitis externa, fungal infections
8. Examine Oral cavity: hygiene, caries, aphthea { *fungal*
9. Examine Neck: Carotid pulse and bruit, thyroid gland palpation, acanthosis nigricans, skin tags
10. Examine heart sounds, air entry at lungs, abdomen [look for lipodystrophy at injection sites, listen for renal bruit]
11. Examine the Feet to check for signs of neuropathy:
 - a. Inspect for edema, skin thinning; pigmentation, corns, callosities,

tinea pedis, hair loss, ulcers, nail changes, amputation, Charcot's deformity, necrobiosis lipodica diabetorum, granuloma annulare, nail changes (onychomycosis, paronychia, ingrown nails) and trimming technique.

- b) Palpate: pulses, temperature, dorsal and plantar flexion power
- c) Check sensation at 10 points by monofilament (10 gm)
- d) Check vibration sense (128 Hertz Tuning fork)
- e) Check proprioception in the big toe
- f) Check ankle reflex (S1, S2) and knee reflex (L3, L4)

Give feedback and thank the patient

Use systematic approach



Examining a Hypertensive Patient

1. Introduce yourself.
2. Wash your hands.
3. Explain what you are going to do and take permission for examining the patient.
4. Expose the body parts to be examined appropriately and take permission to examine the patient.
5. Inspect: Obesity, malar rash, moon-face, acromegalic facies, exophthalmos, marfanoid features, hemiplegic gait.
6. Measure:
 - a. Weight, height, body mass index (BMI).
 - b. Blood pressure: both arms, sitting then standing up right.
 - c. Pulse rate.
 - d. Capillary blood glucose.
7. Examine Eyes:
 - a. Xanthelasma, Arcus Senilis, Cataract, Rubrosis Iridis.
 - b. Visual acuity with Snellen's Chart.
 - c. Visual field with confrontation.
 - d. Pupillary reaction.
 - e. Fundoscopy.
8. Examine hands: comment on clubbing, nicotine staining, sweating, water hammer or collapsing pulse (aortic regurgitation).
9. Examine Oral cavity: comment on hygiene, caries, high arch palate, cyanotic tongue.
10. Examine Neck: check carotid pulse and bruit, palpate the thyroid gland, observe any signs of acanthosis nigricans, skin tags, distended vessels.
11. Examine chest: inspect for pectus excavatum, palpate for any heave or thrill, auscultate heart sounds, air entry at lungs, basal crackles.
12. Examine abdomen: palpate for aortic pulsation, radio-femoral delay and

auscultate for renal bruit.

Examine central nervous system (CNS): comment on cranial nerves, power, tone, sensations, reflexes (if you ran out of time explain: to complete I would do a CNS exam to rule out neuropathic and organ damage)

Give feedback and thank the patient

Use systematic approach.

Examining a Patient with Dizziness

1. Introduce yourself
2. Wash your hands
3. Explain why and what you are going to do and ensure systematic approach.
4. Expose the body parts to be examined appropriately and take permission to examine the patient
5. Gait: observe for any imbalance. Check Romberg's test (ask the patient to stand with his feet together. Then ask the patient to close their eyes. Remain close to the patient in case he begins to sway or fall. Positive for cerebellar lesion if the patient is unable to maintain this position even with his eyes open)
6. Vital signs:
 - a. Comment on heart rate, respiratory rate and blood pressure
 - b. Check the blood pressure both lying, sitting and standing (any postural hypotension with decrease in systolic blood pressure by 20 mmHg and diastolic blood pressure by 10 mmHg within 1 min of standing compared with blood pressure from the sitting or supine position)
7. Eye: if any nystagmus comments on:
 - a. Type of movement: pendular (smooth movement) or jerky
 - b. Direction of movement: horizontal, vertical, rotatory or mixed, fixed or changing
8. ENT:
 - a. Ear canal inspection: any discharge, foreign body, Tympanic Membrane infection or perforation
 - b. Hearing: grossly by whispering or rubbing fingers, precise by Rinne and Weber tests
9. Cardiac: listen to carotids, feel pulse for arrhythmias.
10. Neurological:
 - a. Check gross power and sensation, deep tendon reflexes and cranial nerves

b. Cerebellar signs: gait (cerebellar ataxia), finger-nose test, Dysdiacochokinesia (rapid alternating movements), and heel-shin test (moving the heel over the opposite leg)

11. Special test: Dix-Hallpike Maneuver: seat the patient at the edge of the examination table then assist him or her to lie down suddenly with the head hanging 45 degree backward and turned 45 degree to one side (once to right, once to left and once in the middle) while keeping the eyes open. Check for development of vertigo or nystagmus. Interpret as follows:

- Severe vertigo or nystagmus of fixed direction with characteristic onset after 3 to 10 seconds, and that lessen with repetition indicating peripheral cause of vertigo
- Mild vertigo or nystagmus of variable direction with immediate onset and continuous presence with repetition indicating central cause of vertigo
- Can be followed by Epley's maneuver as a therapeutic option for BPPV to remove debris from the semicircular canals and deposit it in the utricle where hair cells are not stimulated.

12. Give feedback, thank the patient and ensure systematic approach

History Taking and Management Stations

Short Stature

Areas to focus on: Alone (neglected infant), Bone dysplasia (rickets, scoliosis, mucopolysaccharidoses) Chromosomal (Turner, Down), Chronic ongoing disease (renal failure, heart failure) Delayed growth (failure to thrive (FTT), intrauterine growth retardation (IUGR), Constitutional), Endocrine (low growth hormone, Cushing, hypothyroid) Familial, Gastrointestinal malabsorption (celiac, Crohn's).

1. Introduce yourself.
2. Establish good rapport.
3. Identify factors that may :
 - a. Prenatal: maternal health during pregnancy, alcohol use, gestational duration, history of IUGR.
 - b. Growth pattern: Height and weight at and after birth, pubertal changes.
 - c. Underlying disease: Bone disease, cartilage disease, diarrhea, hypothyroid, chronic cough (cystic fibrosis), thalassemia, growth hormone deficiency.
 - d. Family: Parental height, age at menarche, age at pubertal growth spurt, similar condition among siblings.
4. Explore parents and patient's idea, concern and expectations (ICE).
5. Explore other ongoing problems if any and ensure up to date vaccination schedule.
6. Question regular use of medications: steroids, Levothyroxine, treatment for any chronic condition like heart failure, renal failure.
7. Social and family history: exclude neglect, poor care, stress related to peer pressure or bullying at school, alcohol, smoking.
8. Review of systems: energy level, sleep pattern, headache, visual disturbance, vomiting, abdominal pain, polyuria, polydipsia, oliguria.
9. Examination:
 - a. Weight and height plotted on the chart, upper to lower body segment ratio, arm span.
 - b. Mid-parental height (in cm): Boys: (Father's Height + Mother's

Height+13)/2 and Girls: (Father's Height+Mother's Height - 13) / 2).

- c. General exam to exclude dysmorphic features.
- d. General systemic exam.
- e. Tanner Pubertal staging.

10. Arrange referral: if chromosomal, endocrine or chronic underlying features defined.

11. Order required investigations: complete blood count, liver function test, urea and electrolytes, Urinalysis, thyroid stimulating hormone, and Bone Age. Other specialized tests according to indicating features (example growth hormone provocation test).

12. Management and education: share differential diagnosis, and prognosis. Explain to parents familial versus constitutional delay nature and expected outcome.

13. Give reading educational materials if any.

14. Discuss health maintenance and screening for age

15. Arrange for follow up

16. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on parents ICE.

Failure to Thrive (FTT)

Areas to focus on:

- a. Inadequate caloric intake: feeding problem (e.g., poor sucking and swallowing) and breast feeding difficulties, difficulty transitioning to solid foods, insufficient breast milk or formula consumption, excessive juice consumption and parental avoidance of high-calorie foods. Family factors: child neglect or abuse, financial issue
- b. Inadequate caloric absorption: disorders causing frequent emesis (e.g., metabolic disorders, food insensitivities) or malabsorption (e.g., celiac disease, cystic fibrosis, chronic diarrhea, protein-losing enteropathy).
- c. Excessive caloric expenditure: chronic condition, such as congenital heart disease, chronic pulmonary disease, or hyperthyroidism.

1. Introduce yourself
2. Establish good rapport
3. Explore parent's idea, expectation and concern (ICE)
4. Identify the complaint:
 - a. Maternal medical history: Maternal age, gravidity, parity, abortions, pregnancy history (including a detailed history of weight gain, substance or cigarette use, alcohol consumption, nutrition and unusual nutritional practices, and any complications: bleeding, infections and fevers), history of depression
 - b. Neonatal medical history: gestational age determined at birth, IUGR, Apgar scores, birth weight, length, and head circumference with percentiles, neonatal course and complications (including sepsis, jaundice, feeding intolerance, completed review of newborn screens (example: phenylketonuria (PKU), other inborn errors of metabolism))
 - c. Postnatal medical history: immunizations, allergies, medications, food or formula intolerance, weight loss, diarrhea, vomiting, dysphagia, snoring, sleep apnea, recurrent respiratory or other bacterial or viral infections, signs of immune deficiency, malabsorption symptoms and signs, central nervous system abnormalities, developmental delay.
 - d. Detailed history of food intake from infancy through the current period:

5. Dietary details: Milk, formula, solids, vitamins, other supplements
6. Food allergy or intolerance
7. Feeding behaviors: Sucking, chewing, and swallowing difficulty, limited food preference or negative responses to food and feeding; frequency and timing of meals.
8. Caregivers' knowledge : Nutrition and feeding, dietary beliefs, religious and cultural beliefs about food, any unusual diets that might be inappropriate for a child. Basic food and nutritional needs including anything that prevents the family from getting food (example: finances); safe preparation of food by the caregiver (example: clean water, housing or shelter, cooking facility, refrigeration, cooking knowledge).
9. Family history:
 - a. Familial growth patterns.
 - b. Family history of cystic fibrosis.
 - c. History of psychiatric diseases.
 - d. Psychosocial history: Finances and poverty risk factors, environment, family structure, history of abuse or neglect. Prior child with growth problems, family substance abuse or addiction, risks for or signs of maternal postpartum depression, educational level of parent or caregiver
10. Explore ongoing problems.
11. Question regular use of medications:
12. Social and family history.
13. Examination:
 - a. Weight and height plotted on the chart, body mass index.
 - b. General exam: vitals, appearance, activity, affect.
 - c. Skin and hair: Poor hair texture and amount, nails, alopecia, hygiene, rashes, birth marks, trauma (example: bruises, burns, or scars as signs of physical abuse).
 - d. Head: Size, frontal bossing, fontanel size and patency, dysmorphia.
 - e. Eyes: Dysmorphia, ptosis, sunset sign, palpebral fissures, palor, trauma, optic discs, fundus for evidence of chorioretinitis (toxoplasmosis, rubella,

cytomegalovirus infection, and herpes simplex[TORCH]), cataracts.

- f. External ears: Size, shape, position, infection.
- g. Middle ears: Infection, acute or chronic.
- h. Mouth and pharynx : Palate deformity, submucous cleft, tongue, teeth, caries, glossitis, mucous membrane hydration or lesions, thrush, bleeding, unusual odors to the breath.
- i. Neck: Shape, web, masses, nodes, thyroid abnormalities.
- j. Chest: Breath sound, cardiac examination for murmurs or cardiomegaly or arrhythmias.
- k. Abdomen: organomegaly, masses, bowel sounds, normal umbilicus healing in infant.
- l. Genitalia: Normal for age, malformations, ambiguous in quality, hygiene, trauma
- m. Extremities: Edema; digit malformations; examination of the nails, joints, spine, and back.
- n. Neurologic function: Cranial nerves, reflexes (increased or decreased), tone, infant reflexes present or extinguished at appropriate age, gait, suck and swallow coordination.
- o. Muscles: Muscle development and quality and texture of muscle mass.
- p. Adversive behaviors: Gaze avoidance, arching, hypertonicity, refusal to attach or respond appropriately, unusual body movements.

14. Order required investigations:

- a. Complete blood count, liver function test, urea and electrolytes, Urinalysis.
- b. Erythrocyte sedimentation rate and serum creatinine.
- c. HIV test if indicated.
- d. Sweat test for cystic fibrosis.
- e. Zinc level (reported to be low in malnourished infants and children).
- f. Metabolic and endocrinology screening (only as needed).
- g. Tuberculosis testing.
- h. Stool studies (for reducing substances, odor, color, consistency and fat content).
- i. Thyroxin level if indicated [If growth in height is more severely affected than growth in weight].
- j. Skeletal survey for occult trauma if physical abuse.
- k. Head computed tomography (CT) scanning or magnetic resonance imaging (MRI) studies are indicated if examination reveals microcephaly, macrocephaly, or congenital malformation or if abusive head trauma is a concern.

L. Bone age studies of wrists in children who have constitutionally short stature or are extremely malnourished.

15. Management and education:

- Share differential diagnosis, and prognosis.
- Explain the findings to the parents
- Observe feeding
- Educate about nutritional treatment:
 - Eliminate empty calories from items such as soda or other high sugar drinks.
 - Schedule regular meals and snacks [usually 3 meals and 2 snacks per day].
 - No grazing between meals. Offer solids before liquids
 - Consider fortifying calories with extra oils and carbohydrates.
 - Increase protein.
 - Consider vitamin and or mineral supplements, especially zinc and iron.

Give reading educational materials if any

Discuss health maintenance and screening for age

Arrange for follow up: consider psychosocial evaluation.

Communication skills: organized approach, mixed questioning styles [open and close ended questions], active listening, clear language, and reflection on parent's ICE.

Acne

PCo
R/O pregnancy
OCPI

1. Introduce yourself
2. Establish good rapport
3. Identify the complaint: duration, site, onset, why now? (Preparation of social event) relieving or aggravating factors (exam, stress), other area involved, previous attempts for treatment in details (type, duration of use and outcome) associated symptoms or events such as:
 - a. Hirsutism, weight gain, irregular periods, infertility (consider polycystic ovarian syndrome (PCOS))
 - b. Pregnancy and last menstrual period
 - c. Use of oral contraceptive pills
4. Explore patient's ideas, concern and expectation (ICE):
 - a. Ideas: "what do you know about acne?"
 - b. Concerns: losing friends, not getting married, scars, discolored skin
 - c. Expectations: referral to dermatologist and effects of acne?
5. Explore continuous problems: irregular periods, diabetes mellitus, asthma, smoking Past medical, surgical, family and social history
6. Examination: Inspection of the face, shoulders, back, upper arms and chest looking for acne, evidence of scarring
7. Order investigation as indicated: luteinizing hormone, follicle stimulating hormone, HbA1c, testosterone, pelvic ultrasound
8. Management
 - a. Ensure shared understanding, summarize and provide with health education
 - b. Give information on acne:
 - Acne is caused by enlargement of the sebaceous glands (the oil producing glands in the skin) which when blocked become infected with bacteria.
 - Acne is a common problem (mostly in teenagers): up to 80% of people had acne in their lifetime.
 - Triggering factors: Hormonal changes (example puberty, menstrual periods, pregnancy, birth control pills or stress),

use of oil or alcohol based cosmetics, certain drugs (steroids, testosterone, estrogen and phenytoin), high humidity and sweating

- Research does not show that chocolate, nuts, greasy food cause acne, however diet high in refined sugar may be related to acne
- No relation with personal hygiene, black or white heads are not dirt (scrubbing won't help - it actually increases oil production from skin when it is lost promptly)
- It's a chronic problem, needs patience and tolerance of treatment

9. Appropriate prescription

a. Discuss Rx options (use along with sunscreen as they increase photosensitivity):

- Topical:
 - Benzoyl peroxide: to be applied at night (advise the patient to sleep when it is absorbed completely as it can cause bleaching of the hair, clothes and bed linens).
 - Side Effects: include peeling, erythema, and dryness.
 - Retinoids: to be applied at night. Not suitable for pregnant ladies.
 - Side Effects: include peeling, erythema, and dryness.
- Systemic:
 - Antibiotics (e.g. minocycline, tetracycline, doxycycline): Avoid concomitant administration with iron or dairy products (decrease absorption). Not suitable for pregnant ladies or children less than 9-12 years of age.
 - Side Effects: include teeth discoloration, GI upset, (specific for minocycline: dizziness, lupus, greyish pigmentation, high liver function test (LFT))
 - Isotretinoin: discuss in details nature of medication, precautions needed, dual contraception for female patients.
 - Side Effects: include body aches, mucocutaneous dryness, teratogenicity (2 forms of

contraception must be used), high LFTs, thrombocytopenia, hyperlipidemia. (monitor monthly)

10. Give reading educational materials if any
11. Discuss health maintenance and screening for age
12. Arrange for follow up
13. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients ICE.

life of a person

Hirsutism

*PCO ovarian tumor
cushing*

Areas to focus on: Poly Cystic Ovary Syndrome, ovarian tumors, virilization, cushing's disease.

1. Introduce yourself
2. Establish good rapport
3. Identify the complaint: onset, duration, site, character, timing, associated symptoms (temporal balding, clitoromegaly, breast atrophy, deepening of the voice, obesity), rate of progression of hirsutism, modality and frequency of epilation practiced (waxing, threading, laser), menstrual history (age of menarche, oligomenorrhea, infertility):
 - a. History of acne, amenorrhea or oligomenorrhea (polycystic ovaries)
 - b. Moon face (Cushing)
 - c. Galactorrhea, headache, visual disturbances (prolactinoma)
4. Explore patient's, parents ICE (Idea, Concern , Expectation) and effect of the complaint on quality of life
5. Explore ongoing problems, medical and surgical history
6. Question regular use of medications: steroids, androgens, Danazol (used to treat endometriosis), Phenytoin, Minoxidil, Diazoxide, and Cyclosporine.
7. Social and family history: family history of hirsutism, or ovarian tumors
8. Examination: hirsutism pattern, evidence of clitoromegaly, acanthosis nigricans, signs of cushing disease.
9. Order required investigations: urine for sugar, ovarian US. Biochemistry: Total testosterone level, sex-hormone-binding globulin (SHBG), LH or FSH ratio, prolactin level.
10. Arrange referral if signs of virilization noted
11. Management and education: share diagnosis, and prognosis.
12. Give reading educational materials if any

13. Discuss health maintenance and age appropriate screening
14. Arrange for follow up.
15. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients ICE.

Pruritus

Areas to focus on: Dermatologic disease, cholestasis, hyperthyroidism, diabetes mellitus, malignancy, neurologic or psychiatric condition, allergy or medications.

Introduce yourself

Establish good rapport

Identify the complaint (what do you mean by pruritus? which part of the body is involved?); onset, duration, timing (day or night), site, character, relieving or aggravating factors (known allergies, any new exposure to soap, perfumes, food), radiation, severity (interfering with sleep and daily activity), associated symptoms (skin changes; describe the rash if any, symptoms of hyperthyroidism, hyperparathyroidism, gout, pregnancy, iron deficiency anemia, or psychological stress).

Rule out Red flags:

- a. Weight loss, fatigue, and night sweats: think of Human Immunodeficiency Virus(HIV), malignancy (Multiple Myeloma, polycythemia, Hodgkin's lymphoma)
- b. Weakness, numbness, abdominal pain and jaundice think of Cholestasis (Primary Biliary Cirrhosis, pregnancy, Oral contraception pills, liver failure)
- c. Urinary frequency, excessive thirst, and weight loss think of diabetes mellitus

Enquire about patient's or parent's ICE (Idea Concern Expectation), and effect of the complaint on the quality of life (interference with sleep, marital life or work)

Explore ongoing problems: diabetes mellitus, chronic liver or renal disease

Question regular use of medications: aspirin, vitamin B, opiates, amphetamine, and quinidine

Social history: occupation (contact dermatitis, malignancy), smoking, alcohol intake (liver disease)

Family history of a similar problem (scabies).

10. Examination: vital signs, general look (weight loss, jaundiced, alcohol smell), skin (any rash or lesions), lymph nodes, central nervous system, thyroid, cardiovascular system, chest, abdomen.
11. Order required Investigations:
 - a. Complete Blood count to exclude Polycythemia Rubra Vera
 - b. electrolytes and eGFR to exclude renal disease
 - c. IgE level to exclude allergic conditions
 - d. Liver Function Test to exclude chronic liver disease
 - e. HIV screen
 - f. Chest X-ray to exclude malignancy,
 - g. Stool analysis to exclude parasitic infestations
 - h. Fecal immunochemical Test to exclude gastrointestinal malignancy.
12. Arrange referral if needed especially if red flags defined
13. Management and education: share diagnosis, and prognosis.
14. Treat according to the cause:

Benzyl benzoate

 - a. Eliminate underlying cause if any.
 - b. Permethrin 5% cream for patient and contacts if scabies was the cause. Instruct the patient to:
 - Apply to all areas of the body from neck down (including areas between your neck and toes, the skin around your nails, the crease between your buttocks, and the skin between your toes). He or she should never apply the medicine to the nose, lips, eyelids, nor around the eyes or mouth.
 - Leave it overnight for 8-14 hours and wash off morning. Reapply in one week.
 - Treat family members who sleep in the same room
 - The day before starting treatment, all clothes, bedding, towels must be washed with hot water.
 - c. An emollient as dry skin is the most common cause of pruritus.
 - d. Antihistamine to control pruritus (if severe).
 - e. A course of topical steroids such as 1% Hydrocortisone for 3 to 5 days might be helpful if pruritis is localized and history suggestive of atopic dermatitis(eczema) or contact dermatitis.
15. Give reading educational materials if any.

16. Discuss health maintenance and screening for age
17. Arrange for follow up.
18. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients ICE.

Headache

Areas to focus on: Migraine headache or tension headache with hidden agenda (depression, anxiety). Remember to rule out referred pain (sinus, tooth, neck) temporal arteritis, meningitis, intracranial mass, and depression.

1. Introduce yourself and establish good rapport
2. Identify the complaint: duration, site, onset, character, relieving and aggravating factors timing, radiation, any associated vision disturbance, or red flags (fever, sudden onset, sensory neural or motor deficit, head trauma, worse ever sudden onset, purpuric rash, projectile vomiting, change in headache pattern, headache that wakes you from sleep, altered or loss of consciousness, unexplained weight loss, eye squint, family history of brain tumor). Work out your differentials accordingly:
 - a. Episodic (4-72 hours), unilateral, pulsatile or throbbing, moderate to severe, associated with nausea and vomiting, photophobia, phonophobia, preceding aura (bad or burning smell, seeing spots or zigzag lines), previous ER visits for the same reason, prophylactic treatment or response to analgesics suggestive with migraine.
 - b. Fever, nasal congestion or discharge, facial fullness or pain suggestive with sinusitis type of headache.
 - c. Fever, neck pain or stiffness, photophobia, rash, recent travel suggestive of meningitis.
 - d. Very painful red eye, haloes around the lights, blurred vision, nausea and vomiting, similar episodes that were aborted in few minutes suggestive of acute angle closure glaucoma.
 - e. Unilateral temporal headache, dental or facial pain, jaw and tongue claudication with talking and chewing or scalp pain suggestive of temporal arteritis
 - f. Transient visual loss (amaurosis fugax) suggestive of TIA (Transit Ischemic Attack).
 - g. Neck pain or spasm, shoulder pain, numbness upper extremity suggestive of Cervicogenic headache (very common).
 - h. Neurologic, sensory-motor deficit, facial numbness or weakness suggestive of trigeminal neuralgia.
 - i. Unilateral hearing loss, tinnitus, facial palsy suggestive of acoustic neuroma.
 - j. Severe worse ever headache with neck stiffness, vomiting. History of Hypertension suggestive of Subarachnoid Hemorrhage.

- k. Recurrent, severe (ranges from once every other day to up to 8 times daily), strictly unilateral, peri-orbital headache (15-180 min), with ipsilateral autonomic features (lacrimation, nasal congestion, rhinorrhea), ipsilateral miosis, ptosis, restlessness. Agitation, seasonal pattern (clusters of weeks to months with remission for months to periods) suggestive of cluster headache.
- l. Occipital headache increasing with coughing, vomiting or sneezing, associated with dizziness, seizure and vomiting. Suggestive of increased intracranial pressure.
- m. PHQ-2: low mood or loss of interest in the past 2 weeks suggestive of Depression

3. Explore patient's ICE and effect of the problem on quality of life.
4. Explore ongoing problems: exclude Diabetes, Hypertension, Erectile dysfunction, Coronary Artery Disease.
5. Question regular use of medications: analgesia, Oral Contraception, Glyceryl trinitrate, Sildenafil.
6. Social and family history: stressful, events, marital conflicts, domestic violence, job instability, smoking, alcohol
7. Examination: visual acuity, fundus, Blood Pressure, neurologic exam, meningeal signs, sinus tenderness, scalp tenderness, temporal artery swelling
8. Order required investigations as indicated
9. Arrange Referral: urgently if temporal arteritis, meningitis, intracranial mass, angle closure glaucoma.
10. Management and education: Share differential diagnosis, and prognosis

 - a. Analgesia
 - b. Maintain a headache diary (onset (time of the day), duration, character, intensity, aura, precipitating factors, associated and relieving symptoms)
 - c. Anti-migraine:

 - Abortive agents: (ibuprofen), or (Sumatriptan)
 - Prophylactic agents (reduce 50% of the attacks)

 - Indications:

- 2 or more attacks per month with disability lasting more than 3 days per month.
- Failure of or contraindication for or adverse events from acute treatments.
- Use of abortive medication for attacks encountered more than 2 times per week.
- Uncommon migraineous conditions e.g., hemiplegic migraine, migraine with prolonged aura, migrainous infarction.
- First line treatment: Amitriptyline (50-100 mg/day) or Propranolol or Nadolol.
- Second line treatment: Topiramate or Gabapentin or Venlafaxine or Candesartan or Lisinopril.
- Third line treatment: Pizotifen.

d. Treat underlying pathology and consider antidepressants if needed

11. Give reading educational materials if any and arrange for follow up.

12. Discuss health maintenance and age appropriate screening.

13. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patient's ICE.

Fever

Areas to focus on: Infection (abscess, Tuberculosis, granulomata, parasites, bacteria, rheumatic disease, fungi, viruses), multisystem diseases (connective tissue disease, Systemic Lupus erythematosus, polyarteritis nodosa, sarcoidosis, cranial arteritis, polymyalgia rheumatic, rheumatoid arthritis, Still's disease, Inflammatory Bowel Disease), Tumors (lymphoma, solid tumors), or drug fever

Introduce yourself and establish good rapport.

Identify the complaint: duration (acute or chronic), onset (sudden or gradual, post-surgery or trauma, travel, contact or animal or insect bite or contact to patient with Upper Respiratory Tract Infection, exposure to heat or transfusion), character (low or high grade), relieving and aggravating factor (response to antipyretics), timing (continuous or intermittent or diurnal variation), Progression (deteriorating or improving), associated symptoms with (rigors, rash, lumps, coryza, diarrhea, vomiting, arthralgia, myalgia, dizziness), red flags (neck stiffness, weight loss, headache, confusion, hemoptysis)

Explore patients or parents ICE (idea, concern, Expectation), and effect of the complaint on quality of life

Explore ongoing problems: past medical, surgical, menstrual histories.

Question regular use of medications: immunosuppressive medications, dose of antipyretics used if any.

Social (including history of travel) and family history: availability of family support, Access to health care, family history of any cancer, contact with Tuberculosis or any other infection, recent travel to meningitis or malaria endemic areas.

Examination: top to toe: looking for focus: meningeal signs, rash, lymphadenopathy

Order required investigations: Complete Blood count, CRP (C-Reactive Protein), electrolytes.

Arrange referral to ER if needed

10. Management and education: share diagnosis, red flags, and prognosis. Educate about measuring the temperature (rectal is the most accurate in neonates and toddlers), proper dose of antipyretic, other means of treating fever (light clothes, bath in room- temp water, compresses prepared from room-temp water over the neck, axillary or inguinal areas - were vessels are larger to increase evaporation)
11. Give reading educational materials if any
12. Discuss health maintenance, age appropriate screening and arrange for follow up
13. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients ICE.

Red Eye

Areas to focus on: viral, bacterial or allergic conjunctivitis, subconjunctival hemorrhage, foreign body, corneal ulcer, contact lenses use, acute angle closure glaucoma, blepharitis, and uveitis.

Introduce yourself.

Establish good rapport.

Identify the complaint: duration, associated pain or itch, any discharge and its characteristics, any vision disturbance, relieving and aggravating factors. Work out your differentials accordingly:

- Contact with URTI, absence or little discharge, tearing, no visual disturbance, gritty sensation, rash of dermatomal distribution suggestive of viral conjunctivitis.
- Moderate pain, mucopurulent discharge, glued eyes, tearing, no visual disturbance, urethral discharge in a male, rash in a newborn suggestive of bacterial conjunctivitis.
- Chronic itch, tearing, gritty sensation, chronic sneezing or cough, dry skin or eczema suggestive of allergic conjunctivitis.
- Crying, progressive sneezing or sudden redness early in the morning without any other complaint or visual disturbance suggestive of Subconjunctival hemorrhage.
- Headache, very painful red eye, haloes around the lights, blurred vision, nausea and vomiting, similar episodes that were aborted in few minutes suggestive of acute angle closure glaucoma.
- Ocular pain, disturbed vision, progressive diffuse redness, history of arthritis or rheumatologic condition, photophobia suggestive of Scleritis.
- Trauma to eye, foreign body sensation, contact lenses use, tearing, visual disturbance, photophobia suggestive of corneal ulcer.
- Painless visual loss with floaters suggestive of uveitis.

Explore the patient's ICE (Idea, concern, expectation).

Identify the effect of complaint on the quality of life.

Explore any ongoing problems: exclude Diabetes, Hypertension, MS, Migraine, Neuromatologic condition, bleeding disorders (gum bleeding, epistaxis, bruising).

7. Obtain a brief social and family history.
8. Examination: visual Acuity, Extraocular eye movement, Pupils, corneal stain, tonometer, inspection of lids, bliphere, conjunctiva, sclera, cornea, color vision, visual field
9. Arrange Referral: urgently if angle closure glaucoma, corneal ulcer, scleritis or uveitis
10. Management and education:
 - a. Share the differential diagnosis with the patient
 - b. Conservative approach to self limiting conditions (like subconjunctival hemorrhage): Cold compresses and avoidance of contact lens use
 - c. Hand washing for viral conjunctivitis
 - d. Topical antibiotic for bacterial conjunctivitis
 - e. Allergen avoidance and "Emedastine" for allergic conjunctivitis
 - f. Educate patient about red flags (severe pain, blurred vision, headache, photophobia, excessive discharge, floaters and colored halos) and advise to come back if any.
11. Give reading educational materials if any.
12. Discuss health maintenance and age appropriate screening.
13. Order required investigations.
14. Arrange for follow up in 2 days.
15. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients ICE.

Cough

Areas to focus on: The duration of cough and serious life threatening conditions that need to be ruled out (pulmonary tuberculosis, pulmonary embolism, congestive heart failure and malignancy)

Acute:

- An acute upper respiratory infection (i.e., common cold)
- Lower respiratory tract infection
- An exacerbation of a preexisting condition (e.g., asthma, bronchiectasis, chronic obstructive pulmonary disease [COPD], or upper airway cough syndrome)
- Life-threatening conditions (e.g., pulmonary embolism, congestive heart failure, pneumonia)

Subacute:

- Postinfectious cough: (postnasal drip, upper airway irritation, mucus accumulation, a manifestation of bronchial hyperresponsiveness that may be associated with asthma)
- Ongoing allergen or irritant exposure, lingering effects of an infection, pneumonia
- Acute exacerbation of chronic bronchitis
- B. pertussis (i.e., whooping cough) Chronic cough:

Adult:

- Angiotensin-converting enzyme inhibitor use
- Asthma
- Gastroesophageal reflux disease
- Upper airway cough syndrome

Children:

- Asthma
- Gastroesophageal reflux disease
- Upper or lower respiratory tract infection

Introduce yourself, establish good rapport and take basic demographic info

Identify the complaint: Onset (sudden or gradual), duration (acute: less than three weeks, subacute: from three to eight weeks, chronic: more than eight weeks), nocturnal, progression, intermittent or continuous, productive or non-productive, relieving and aggravating factors (Worse by lying down (post nasal drip, Esophageal reflux, bronchiectasis, bronchitis and heart failure), Worse by exercise, exposure to allergens (asthma). Associated symptoms as:

- a. Sputum (if present): how much, how often, color, consistency, any blood, (clear e.g. Hypersensitivity mechanism) purulent e.g. Chronic infection]. [Bloody - example: Tuberculosis, Bronchiectasis, heart failure and Cancers].
- b. Hemoptysis (if present): volume, fresh or altered blood, frequency, nature of associated sputum if any? Mixed in? (suggestive of chest infection, tumor, Tuberculosis, infarction)
- c. Orthopnea, dyspnea, paroxysmal nocturnal dyspnea and leg swelling suggestive of Heart Failure.
- d. Fever suggestive of infection.
- e. Weight loss suggestive of cancer or Tuberculosis.
- f. Insomnia, daytime somnolence suggestive of obstructive sleep apnea.
- g. Allergic history, wheezing suggestive of Bronchial Asthma or Allergic Rhinitis.
- h. Throat tickling sensation suggestive of post-nasal drip or gastroesophageal reflux

3. Explore patients ICE (Idea, Concern, Expectation) and the effect of the problem at work on patient
4. Explore ongoing problems: Asthma, Allergy, Heart failure, chronic bronchitis, hypertension, heartburn).
5. Question use of regular medication: ACE-Inhibitors, Angiotens Receptor Blockers, calcium channel blockers worse gastroesophageal reflux disease, Nonsteroidal anti-inflammatory drugs and beta blockers induce asthma exacerbations, nitrofurantoin (causes lung fibrosis).
6. Social and family history: smoking, occupational history, asthma, allergic rhinitis, Tuberculosis, Upper Respiratory Tract Infection or pneumonia, recent travel.
7. Examination: Vitals, Cardiovascular System, Chest, Ear, Nose Throat and peak flow meter if needed.
8. Order required investigations as indicated: Peak Expiratory Flow Rate, Chest X-Ray, Monteux test.
9. Arrange Referral: as required for cardiology or suspected malignancy, bronchiectasis.

Management and education: share diagnosis:

- a. Post nasal drip or allergic rhinitis nature and need for nasal steroids
- b. Congestive Heart Failure treatment and need for referral to cardiology
- c. Asthma and role of avoiding allergens, disease controllers and asthma action plan
- d. Gastroesophageal reflux disease and role of Proton Pump Inhibitors
- e. Pertussis : should have a nasopharyngeal swab for culture. Patients with confirmed whooping cough should receive macrolide antibiotics and should be isolated for five days beginning on the first day of treatment.
- f. Smoking cessation is almost always successful in eliminating cough within four weeks.
- g. If the persistent cough is caused by an exacerbation of COPD, antibiotics or corticosteroids should be considered.
- h. Cough caused by an ACE Inhibitor usually will stop within two weeks of ceasing the medication

11. Give reading educational materials if any.

12. Discuss health maintenance and screening for age and arrange for follow up.

13. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients ICE

Sore throat

Areas to focus on are: usually simulated patients with minor illness appear in the exam to test certain skills.

Example: patient demanding referral for tonsillectomy, patient demanding antibiotic inappropriately, smoker for counseling, patient with hidden agenda (marital problem, parent using the child as presenting complain, malingering patient requesting sick leave)

1. Introduce yourself and establish good rapport
2. Identify the complaint: onset, duration, character, relieving or aggravating factors, associated symptoms (fever, malaise, rash, runny nose, cough, Shortness of breath.)
3. Rule out Red flags: Ashen color and drooling child indicating Epiglottitis, signs of meningism indicating meningitis, unstable vital signs indicating streptococcal sepsis, murmur, heart failure (indicating rheumatic fever), or unilateral swelling, marked tenderness, trismus indicating peritonsillar abscess
4. Does the patient fit the Modified Centor criteria? Does he or she have:
 - a. Absence of cough, high-grade fever (more than 38 degree C), 3 or more tender anterior cervical lymph nodes, tonsillar exudates or swelling, age (3- 14 years = 1 point, more than 45 years = -1 point)
 - b. Classify according to cumulative score: If less than 2 no need for antibiotic or further testing, If 2-3 perform rapid strep test or throat culture, if 4 consider empiric antibiotic
5. Does the patient have indications for tonsillectomy (Toronto Notes, Otolaryngology pg. 43, 2011)
 - a. Tonsillitis: Chronic or recurrent (4 to 7 episodes in 1 year or more than 5 episodes per year over 2 consecutive years or more than 3 episodes per year over 3 consecutive years)
 - b. Obstruction: compromise to airway, swallowing or voice quality
 - c. Malignant tumor of the tonsil or suspicion of malignancy
 - d. Uncontrollable hemorrhage from tonsillar blood vessels.
 - e. Peritonsillar abscess: more than 1 episode or 1 episode with history recurrent tonsillitis
 - f. Chronic pharyngeal carriage of Group A Beta-Hemolytic

Streptococci.

- g. Halitosis, refractory to other measures.
- h. Syndrome of periodic fever, aphthous stomatitis, pharyngitis, and cervical adenitis, PFAPA syndrome (Periodic Fevers with Aphthous Stomatitis Pharyngitis and Adenitis Syndrome) unresponsive to conservative treatment.

Explore patients, parents ICE, effect of the complaint on quality of life

Explore ongoing problems: immunocompromised, DM, asthma, malnutrition, vaccination coverage, allergy.

Question regular use of medications.

Social and family history: smoking, poor social conditions, family history of RF (risk of RF)

10. Examination: vital signs, neck (Lymph nodes), skin (rash, ENT (Ear Nose and Throat), abdomen (splenomegaly), (enlarged Lymph Nodes, rash, and splenomegaly indicate infectious mononucleosis).

11. Order required investigations as indicated: rapid strep. Test and throat swab (for culture and sensitivity), Complete Blood Count, Infectious Mononucleosis test if highly suspected.

12. Management and education: share diagnosis; discuss nature of the problem and prognosis.

- a. If pharyngitis: use large enough dose of appropriate antibiotic, at the right frequency, for the right duration
- b. If Upper Respiratory Tract Infection:
 - Explain to the patient or parents the nature of the disease: "Infections of the upper respiratory tract can be viral or bacterial. The bacterial infection can be controlled by antibiotics. However, the viral infections do not."
 - Explain to the patient or parents the role of Centor criteria: "There are a set of clinical features that we can use to determine whether this is a viral or bacterial infection. These are (mention the centor criteria). Fortunately, you or your child does not fit the criteria and thereby does not need an antibiotic"

- Encourage symptomatic treatment: paracetamol for fever, nasal saline spray for nasal congestion, honey for cough (advice against anti-tussives), you can advise to use zinc gluconate.
- Safety netting: "Viral infections can decrease patient's immunity and he or she can therefore develop a secondary bacterial infection. If you or your child develop non-responding fever or does not tolerate oral feeds please come back for review"

13. Give reading educational materials if any.
14. Discuss health maintenance and screening for age
15. Arrange for follow up, referral if indicated (to ENT for epiglottitis or tonsillectomy)
16. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients ICE.

Epistaxis

Areas to focus on: trauma (digital, blunt, foreign bodies), barometric changes, nasal dryness, chemicals (Cocaine, Xylometazoline, nasal steroids), malignancy (especially if unilateral in an adolescent male), or systemic disease (coagulopathies, hypertension, hepatic disease, leukemia, thrombocytopenia... etc.). Physiologic congestion in pregnancy may result in epistaxis which is self limited.

1. Introduce yourself
2. Establish good rapport
3. Identify the complaint, duration, site, onset, character, relieving and aggravating factors and timing.
4. Define onset of any trauma, exposure to extreme weather changes or altitude changes
5. Explore patient's ICE (Ideas, concerns, Expectations): Trauma, Hidden agenda or asking for sick leave
6. Explore ongoing problems: allergic rhinitis, nasal dryness, Hypertension, Bleeding disorder, hepatic disease, leukemia, or pregnancy
7. Question regular use of medications: Otrivin, nasal steroids, Aspirin, warfarin
8. Social and family history: briefly exclude bleeding disorders among males, abuse or domestic violence, smoking, cocaine sniffing, alcohol.
9. Examination:
 - a. Assess blood loss: vitals, IV normal saline, cross match 2 units packed RBC if significant.
 - b. Determine site of bleeding: use topical anesthetic and vasoconstrictor to facilitate exam and use nasal speculum and good lighting.
 - c. Attempt to control the bleeding
 - First line: Xylometazoline
 - Second line: cauterize with silver nitrate (one side of septum only)
 - If these fail, or if bleeding is posterior, nasal packing (must monitor for complications)

10. Arrange referral: to Otolaryngologist if posterior bleed, unstable vitals, uncontrolled bleed despite packing.
11. Management and education: share differential diagnosis, and prognosis, first-aid: ABCs, lean forward, pinch cartilaginous portion of nose for 20 min, breath through mouth, avoid blowing, straining or heavy lifting. Applying cold pack on upper nose may help. To prevent bleeds, steam inhalation, lubricate nostril with olive oil, if recurrent may require cauterization.
12. Give reading educational materials if any.
13. Discuss health maintenance and screening for age.
14. Order required investigations: Complete Blood count, Prothrombin time and Partial Thromboplastin Time, Liver Function Test as indicated
15. Arrange for follow up
16. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients ICE.

Earache

Areas to focus on: Otitis externa (fungal, bacterial, acute or chronic), Otitis Media (with or without tympanic membrane perforation)

1. Introduce yourself

2. Establish good rapport

Identify the complaint: duration, site, onset, character, relieving and aggravating factors, timing, radiation, discharge, and triggers (recent upper respiratory tract infection, fever, disturbed sleep, swimming)

- a. If recurrent: check how frequent, any associated hearing or speech impairment
- b. Associated manifestations: dental problems, dermatitis, psoriasis, excessive cleaning, fingernail injury, and recent trauma to the ear.
- c. Exclude Dawn Syndrome, immunocompromised state.

Explore patient's or parent's ICE (Ideas, Concerns, Expectation)

Explore ongoing problems: Diabetes Mellitus, Asthma, Malnutrition,

Question regular use of medications: long term antibiotics.

Social and family history: child neglect, Failure To Thrive, developmental circumstances, smoking in adults.

Inquire about Childhood vaccination status.

Examination: Body temperature, Ear Nose Throat exam, tympanometry

Order required investigations: ear swab for culture.

Arrange referral: if chronic, needs mastoidectomy, malignant otitis externa in Diabetes Mellitus patient.

Management and education: share differential diagnosis, and prognosis. Control, antibiotics use, swimming avoidance.

Otitis Media: Treat with oral Amoxicilline, as first line antibiotic, for 7 to 10 days. For moderate symptoms 40-60 mg/kg dose advised

while higher doses are needed for severe case presentations(80-90 mg/Kg). Regular antipyretics and pain killers such as Paracetamol or Ibuprofen are also indicated as supportive measures.

b. Otitis Externa: Treat with topical otic drops for 7 days, such as Ciprofloxacin with dexamethasone combined otic preparations. If examination is suggestive of fungal otitis externa then Clotrimazole otic solution is indicated.

13. Give reading educational materials if any.
14. Discuss health maintenance and age appropriate screening.
15. Arrange for follow up.
16. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients ICE.

Dizziness or Vertigo

Areas to focus on: Benign paroxysmal vertigo, Meniere's disease, vestibular neuritis or labyrinthitis, acoustic neuroma, vertebrobasal insufficiency, multiple sclerosis, medication's side effect.

1. Introduce yourself and establish good rapport.
2. Identify the complaint:
 - a. Clarify "What do you mean by dizziness?" true vertigo (spinning), light headedness (vague floating sensation), presyncope (will faint), or disequilibrium (unbalanced).
 - b. Determine: onset (acute or chronic), duration, timing, frequency, previous episodes, relieving or aggravating factors (change in head position, auricle manipulation, coughing or sneezing), associated symptoms: (visual disturbance, hearing loss, tinnitus, otalgia, otorrhea, coryza symptoms, depression, anxiety, hyperventilation), relevant past history (previous ear surgery, head or neck trauma), history of recent travel, upper respiratory tract infection .
- c. Red Flags:
 - Vertigo with diplopia, dysarthria, weakness, numbness, confusion, Loss of consciousness, swallowing problem, seizures suggestive of central cause
 - Presyncope with tinnitus, hearing loss, nausea or vomiting, headache, sweating, tremors suggestive of hypoglycemia
 - Presyncope with palpitation or chest pain suggestive of valvular disease or Acute coronary syndrome
 - If none, classify accordingly:
 - Vertigo with fluctuating deafness, tinnitus, ear fullness, nausea and vomiting suggestive of Meniere's disease
 - Ear pressure, hearing loss, increased with Valsalva maneuver suggestive of prelymphatic fistula of middle ear.
 - Vertigo (sever or persistent for days followed by gradual improvement over weeks) with history of upper respiratory tract infection, gait instability, nausea, vomiting, lateralized falls suggestive of acute labyrinthitis (vestibular neuritis).
 - Vertigo with unilateral tinnitus and hearing loss,

progressive facial numbness, weakness suggestive of acoustic neuroma.

- Vertigo (positional and lasts for seconds) with nausea, vomiting and wakes the patient from sleep when turning over in bed suggestive of benign positional vertigo.
- Lightheadedness with hyperventilation suggestive of Psychosomatic.

3. Explore patient's ICE (Ideas, Concerns, Expectations) and the effect of the problem on the quality of life
4. Explore ongoing problems: exclude Diabetes Mellitus, Hypertension, pregnancy, anemia, heart disease, and history of stroke or neurologic disorder.
5. Question use of any regular medications such as: antihypertensive, sedatives, antihistamines, antibiotics, aminoglycosides, quinine, anticonvulsants and antidepressant.
6. Social and family history: smoking, alcohol, lack of support, home environment, emotional or financial problems.
7. Examination:
 - a. Vital signs: Including blood pressure in sitting and standing (a drop in Systolic Blood Pressure of as much as 20 mmHg or Diastolic blood pressure of up to 10 mmHg, or a rise of heart rate of up to 20 beats per minute).
 - b. Eye: for nystagmus.
 - c. Ear: auscopy, Rinne and Weber tests.
 - d. CVS: carotids for bruits, heart sounds or murmurs)
 - e. CNS: cranial nerves, gait, cerebellar signs, motor and sensory.
 - f. Dix-Hallpike maneuver: The patient should be on sitting position on the edge of the exam table:
 - Facing forward with eyes open
 - Rapidly lie the patient backward with head turn 45° to the right side and neck extends 20° hanging over the end of the table and wait for 20 seconds on that position.
 - Then repeat on the other side
 - The patient's eyes should be kept open to observe (1) the development of vertigo and (2) the time of onset,

duration, and direction of nystagmus. Classify accordingly: (mild vertigo that develops immediately and continuous infinitely and changing nystagmus direction suggestive of central vestibulopathy), (Sever vertigo that develops in 3-10 seconds and decrease with repetition and fixed nystagmus direction indicates peripheral vestibulopathy)

Order required investigations as indicated: Complete blood count, Electrocardiogram, audiologic evaluation...etc.

- Management and education: share diagnosis and prognosis, treat underlying causes if any, and advise: "I understand that these symptoms are frightening. However, I would like to reassure you as most causes of vertigo are not serious health threats":
 - Ask the patient to lie still in a darkened room and avoid head movement if acutely vertiginous.
 - Advise the patient to avoid provocative movement.
 - Symptomatic relief medications:
 - Antihistamines as meclizine: inhibit vestibular organ receptors and prevent activation of vagal response.
 - To be taken for few weeks followed by gradual discontinuation
 - Discuss Side Effects: dry mouth and sedation.
 - Antiemetic e.g. Prochlorperazine
 - Discuss Side Effects: Sedation
 - Ensure patient safety (Driving, dealing with heavy machinery).
- Give reading educational materials (How to perform Apply's exercise)
- Discuss health maintenance and age appropriate screening
- Arrange for follow up or referral if indicated (neurologist if central cause, cardiologist if cardiac cause, ENT if medical treatment fails).
- Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients ICE.

Hearing Loss

Areas to be focused on:

- a. Conductive hearing loss: Cerumen impaction, otitis media, otosclerosis; cholesteatoma, Tympanic Membrane perforation.
- b. Sensorineural hearing loss: Presbycusis, noise trauma; medications; autoimmune disease; temporal bone fracture); Meniere disease; infection (meningitis or labyrinthitis), neoplasm acoustic neuroma).

1. Introduce yourself
2. Establish good rapport
3. Identify the complaint: onset, unilateral or bilateral, frequency, aggravated and relieving factors, associated symptoms:
 - a. Otolologic symptoms: otalgia, pulling of the ears, ear discharge, tinnitus, and vertigo.
 - b. Neurologic symptoms: Headache, weakness or asymmetry of the face, abnormal sense of taste, fullness of the ear.
 - c. Other symptoms: fever, Upper Respiratory Tract infection features or vomiting (children "Otitis Media").
 - d. Red flags: sudden loss, head trauma, noise (gunshot or explosion), visual impairment suggestive of tumor, and delays in speech, language development and delayed motor development.
4. Explore patient's ideas, concerns, expectations and impact of hearing difficulty on the patient's life: consider depression, keep in mind hearing loss stigma, cost and inconvenience.
5. Explore ongoing problems: DM, chronic infections, renal failure, atherosclerosis
6. Medications and allergies history: (Salicylates, NSAIDs, Acetaminophen, Aminoglycosides, Cisplatin, Diuretics, topical Neomycin, Quinine, tea tree oil, Macrolides, Vincristine, Sildenafil).
7. Family history: Hearing loss, brain tumor.
8. Social history: marital status, smoking, alcohol, employment (military, planes).

Examination: Ear, head and neck and neurologic examination (cognitive function, Cranial nerves).

- Otoscope: Tympanic Membrane perforation, drainage, otitis media
Otocholesteatoma/ foreign body.
- Whispered voice test.
- Weber test and Rinne test to compare air or bone conduction.
- Audiometry and Tympanometry "These quite simple tests that are not uncomfortable and, as you can imagine, the audiologists are very experienced in dealing with children and getting accurate results at any age"
- Language testing in children with persistent infection three months or developmental delay.

Investigations: only needed in the presence cranial nerve or neurological deficit.

Arrange Referral:

- Otolaryngologist: sudden sensorineural hearing loss or for hearing aids.
- Rehabilitation: Communication therapy programs.

Management and education (share differential diagnosis):

- Explain and treat accordingly: "Hearing problems are common in children. The most common cause of hearing problems is a 'glue ear', which is a build-up of sticky fluid in the middle ear following middle-ear infections. The outer ear can get blocked with things such as wax and foreign objects put in there by the child."
- Cerumen impaction: watchful waiting, manual removal or ceruminolytic agents. Avoid using of cotton swabs and ear candles.
- Otitis media: amoxicillin (child dose: 80-90 mg/ kg/ day) if resistant macrolide, clindamycin or cephalosporins.
- Hearing aids if needed.

Give reading educational materials if any.

Discuss health maintenance and screening for age.

Arrange for follow up, safety netting and reflecting on patient's ideas, concerns and expectations

Communication skills: organized approach, mixed questioning styles (open

and close ended questions), active listening, clear language, and reflection on patient's ideas, concerns and expectations.

Fatigue

Areas to be focused on: Physiologic fatigue, chronic fatigue syndrome, risky behaviors, depression or sleeping disorders, chronic diseases, life threatening conditions (cancer), hypothyroidism and rheumatologic conditions.

1. Introduce yourself
2. Establish good rapport
3. Identify the complaint: lack of energy, mental exhaustion, poor muscle endurance, onset, duration (recent, prolonged, or chronic), frequency, recovery period's recovery (Chronic Fatigue Syndrome: lasting hours or days) aggravated and relieving factors.
 - a. Evaluate sleep quality and quantity: hours, falling asleep (reading, watching or talking), sleeping environment and habit.
 - b. Associated symptoms: weight gain or loss, steatorrhoea, cold or heat intolerance, heavy periods, nausea, vomiting, shortness of breath, snoring, fever, night sweating, joint pain, headaches, sore throat, cough, rectal bleeding, polyuria, polydipsia.
 - c. PHQ-9 (patient health questionnaire) assessing depression and CAGE questions (Cut down, Annoyed, Guilty, Eye-opener) for alcohol dependence assessment.
4. Explore patient's ICE and impacts on work performance, family or social relationships.
5. Explore ongoing problems: past medical (chronic diseases) and social histories.
6. Medications: anti arrhythmic, antihypertension, antiepileptic, antihistamine, antidepressants agents, steroids, immunosuppressants and allergies history.
7. Family history: chronic diseases, cancers, hypothyroidism, rheumatologic condition.
8. Social history: marital status, smoking, alcohol and substance abuse, unprotected sexual intercourse, employment.
9. Examination: as indicated by symptoms.

- a. Jaundice, palmar erythema, Dupuytren's contracture, spider nevi (Chronic Liver Disease).
- b. Cardiac murmurs (endocarditis) pallor and tachycardia (anemia), edema or high Jugular Venous Pressure suggestive of congestive heart failure).
- c. Hypotension, pigmentation in skin creases, scars, and buccal mucosa suggestive of Addison's disease).
- d. Prolonged expiration, wheezing, cyanosis suggestive of Chronic Obstructive Pulmonary Disease).
- e. Weight loss or gain, hyper or hypo-reflexia, tachycardia or bradycardia, Atrial fibrillation, fine tremor, golter.
- f. Red butterfly rash on the face, joint deformity suggestive of Systemic Lupus Erythematosus).
- g. Tender points suggestive of Fibromyalgia.
- h. Babinski's reflex, ataxic nystagmus suggestive of Multiple Sclerosis.
- i. Pruritus, excoriations, xanthelasma suggestive of Primary Sclerosing Cholangitis.

10. Investigations: Complete Blood Count, pregnancy test, Thyroid Stimulating Hormone, ESR, Anti-Nuclear Antibody, electrolytes, Liver Function Test, vitamin D 25-hydroxy level, urinalysis, serum level of heavy metals (lead, mercury), HIV testing and hepatitis serology, cardiac enzymes, Electrocardiogram, tumor markers as indicated.

11. Arrange Referral: to subspecialty as needed.

12. Management and education (share differential diagnosis):

- a. Regular physical activity: Stretching and aerobic exercise as walking 30 minutes (evidence A).
- b. Short naps are proven performance enhancers and sleep hygiene.
- c. Selective Serotonin Reuptake Inhibitors (six weeks trial): fluoxetine or paroxetine or sertraline for energy if depression present (evidence B).
- d. Chronic fatigue syndrome: cognitive behavior therapy (evidence A).
- e. Treat underlying cause.
- f. Pain control: venlafaxine, desipramine, nortriptyline, duloxetine or non-steroidal anti-inflammatory drugs.

13. Give reading educational materials if any.

14. Discuss health maintenance and screening for age.
15. Arrange for frequent follow up (every two weeks or monthly), safety net and reflect patient's ideas concerns and expectations.
16. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patient's ideas concerns and expectations.

Hypothyroidism

Areas to focus on: symptoms, signs and management of hypothyroidism, family history of other autoimmune disorder

1. Introduce yourself
2. Establish good rapport
3. Identify patient complaint, duration, site and radiation, onset, character, relieving or aggravating factors, associated symptoms
 - a. Fatigue.
 - b. Skin or hair changes.
 - c. Cold intolerance.
 - d. Decrease memory or concentration.
 - e. Carpal tunnel syndrome.
 - f. Slow speech.
 - g. Heavy periods.
 - h. Constipation.
 - i. None refreshing sleep.
 - j. History of Treated hyperthyroidism, previous head or neck radiation
 - k. Depression.
 - l. Weight gain.
 - m. Personal or Family history of autoimmune disease (example Diabetes Mellitus type 1, Addison disease).
 - n. Medications: Lithium, immune modulators e.g. Inter-Feron-alpha, Iodine containing antiarrhythmic e.g. Amlodarone.
4. Explore patient's ICE (Idea, Concerns, Expectation).
5. Explore ongoing problems: Diabetes Mellitus, celiac, anemia, vitiligo, rheumatoid arthritis, hypercholesterolemia, depression, down syndrome, any other autoimmune disease, cardiac disease.
6. Past medical and surgical history: inquire about thyroidectomy, radiation to the neck, use of radioactive iodine.
7. Social and Family history: hypo or hyperthyroidism in the family or any autoimmune disease.

8. Examination: general including vitals (bradycardia, reduced Systolic Blood Pressure), Neck: look for goiter (Hashimoto) increase in weight, signs of depression, thin brittle hair, dry skin, dull facial expression, coarse voice, peri-orbital puffiness, swelling of hand and feet, delayed relaxation of Deep Tendon Reflexes, Tinel's sign: test for carpal tunnel thickening (flexure retinaculum is thickened by myxedema and it may entrap the median nerve in the carpal tunnel).
9. Order required investigations as indicated: Thyroid Stimulating Hormone, T3-T4, Anti- TPO antibodies, Lipid panel, Complete Blood Count, Ultrasound of the thyroid
10. Arrange Referral if needed e.g. central hypothyroidism with low Thyroid Stimulation Hormone and low free T4 refer to endocrinology and hypothyroidism unresponsive to treatment.
11. Management and education:
 - a. Replacement with levothyroxine for life: start slow go slow (especially for patients who are more than 60 years and those who have IHD)
 - b. Intake instruction: take it early in the morning on an empty stomach. Delay breakfast until 30-60 minutes, after taking it. Visit your doctor once pregnant (usually needs monitoring of TSH in each trimester with a probable dose increase by 25-50mcg)
 - c. Side effects: palpitations, sweating, disturbed sleep, loose motions.
 - d. Delayed full effect
 - e. Need for regular follow up at least twice a year
 - f. Complications of hypothyroidism (if untreated): increased risk of CAD, 2ry hyperlipidemia, depression, memory decline
12. Give reading educational materials if any
13. Discuss health maintenance and screening for age
14. Arrange for follow up
 - a. First TSH should be planned 6-8 weeks from the beginning of treatment to be, full effect may be delayed in terms of feelings improvement up to 8 weeks
 - b. Once goal dose is achieved; symptoms must be monitored every 6-8 weeks, TSH level annually for elderly but every 2 to 3 years for young adults

15. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients ideas, concerns and expectations.

Tremor

Areas to focus on: Essential tremor, Alcohol or medication-induced, cerebellar disease, Hyperthyroidism, Anxiety, Parkinson, and Metabolic: hepatic encephalopathy, low calcium, and hypoglycemia.

1. Introduce yourself
2. Establish good rapport
3. Identify the complaint (What do you mean by tremor?): Onset (gradual or sudden), Character (Is it visible or only sensation of tremor, Resting or with movement), duration, part of body involved (neck, hand, head), symmetry (symmetrical or asymmetrical), relieving or aggravating factors, associated symptoms. Classify as follows:
 - a. Sweating, palpitations, weight loss (hyperthyroidism).
 - b. Excessive worries, poor concentration, fatigue, disturbed sleep, Irritability (Generalized Anxiety Disease)
 - c. Coarse resting tremors, pill-rolling movements suggestive of Parkinson.
 - d. Wing-beating, resting tremor suggestive of Wilson's disease.
 - e. Coarse, slow tremor that appears both in rest and with movements suggestive of rubral tremor.
 - f. Tremors that decrease by distraction suggestive of psychogenic causes.
 - g. Tremor that decrease with alcohol intake suggestive of familial causes.
 - h. Immediate limb jerk after standing suggestive of orthostatic tremor.
4. Explore patients or parents ICE (Ideas, Concern, Expectations), and effect of the complaint on quality of life.
5. Explore ongoing problems: cerebellar disease, Parkinson, Diabetes Mellitus, Hypertension.
6. Past Medical or Surgical history: head trauma, Multiple Sclerosis, brain tumor.
7. Question regular use of medications: Lithium, Tricyclic antidepressant toxicity, Thyroxin, Ventolin.

8. Social and family history: similar problem in the family suggestive of Familial tremors, Smoking, Alcohol use.
9. Examination: define the type of tremor (fine, pill rolling, rest or intentional)
10. Order required investigations: TSH.
11. Arrange Referral to neurology or endocrine as indicated
12. Management and education: share diagnosis, and prognosis.
13. Give reading educational materials if any.
14. Discuss health maintenance and age appropriate screening.
15. Arrange for follow up.
16. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, reflection on patient's ICE.

Chest pain

Areas to focus on: Acute Coronary Syndrome, Myocardial infarction, aortic dissection, pericarditis, anxiety, HZV (Herpes Zoster Virus), trauma, Gastroesophageal reflux disease.

1. Introduce yourself.
2. Establish good rapport.
3. Identify the complaint.
 - a. Site "Where exactly is the pain?" onset (constant or intermittent, gradual or sudden), has the patient had this pain before, duration, frequency, character, progression, severity (consider using the 1-10 scale), radiation, associated symptoms, exacerbating or relieving factors (exercise, rest).
 - b. Increased pain with respiration, movement, or lying supine, radiation to the shoulder and relieved with leaning forward and sitting indicate Pericarditis.
 - c. Palpitations, sweating, nausea, vomiting, dizziness, typical radiation to the jaw or shoulder, pain that increases with exertion and decreases with rest, sharp squeezing pain or heaviness in chest indicate Ischemia.
 - d. Shortness of Breath, hemoptysis, calf pain, recent travel, pregnancy, postpartum, use of oral contraception indicate Pulmonary Embolism. Check if the patient meets the modified Wells criteria for PE (Pulmonary Embolus).
 - 1.5 points for each of: history of PE/DVT (Deep Venous Thrombosis), heart rate of more than 100 beats per minutes, recent immobilization or surgery.
 - 3 points for each of: clinical picture of DVT, other diagnosis unlikely.
 - 1 point for each of: hemoptysis, cancer.
 - Calculate total and classify accordingly: 0-1 (low probability of PE), 2-6 (moderate probability of PE), more than 6 (high probability of PE)
 - e. Cough, fever and sputum indicate Pneumonia or Pleurisy.
 - f. Pain radiating to the back and history of smoking indicate Aortic Dissection
 - g. Heart burn, retrosternal pain, dysphagia, dyspepsia, and NSAIDs

use indicate Peptic Ulcer Disease.

- h. Skin rash with pain suggestive of Herpes Zoster(Fire band)
- i. Localized sharp pain, increased with movement or deep inspiration, history of trauma or fall, heavy exertion indicate muscular source of pain.
- j. History of skeletal pain or tumor think of metastasis.
- k. Pain and swelling at costo-chondral junctions indicate costochondritis.
- l. Psychiatric: anxiety, malingering, depression therefore ask about mood, excessive worries, stresses .etc.

4. Explore patients ideas, concerns, expectation (ICE), and effect of the pain on quality of life, job and exercise tolerance.
5. Explore ongoing problems and Past Medical History: Previous Myocardial Infarction, history of DVT or PE, recent surgery, current pregnancy, history of malignancy, Immobility, Diabetes Mellitus, Hypertension, hyperlipidemia, smoking, history of CABG [Coronary artery bypass graft surgery] or angioplasty.
6. Question regular use of medications: oral contraceptive pills, Aspirin, Non steroidal anti-inflammatory drugs.
7. Social and family history: cardiac event and at what age, stressful events, marital conflicts, job instability, smoking, sedentary lifestyle, alcohol.
8. Order required investigations as indicated: ECG, Troponins, lipid profile, HbA1c.
9. Arrange Referral to emergency department if suggestive of Myocardial Infarction with supportive therapy (MONA): Morphine, Oxygen, Nitro sublingual and Aspirin 300 mg, maintain blood pressure, medication to be considered post myocardial infarction are: ACE inhibitors, lipid lowering agent(statins) and aspirin. (Remember: MONA is inappropriate for hypotensive patients or those with posterior Myocardial infarction)
10. Management and education: share diagnosis, and prognosis, role of healthy diet and exercise, quitting smoke, losing weight... etc.
11. Give reading educational materials if any.

12. Discuss health maintenance and screening for age.
13. Arrange for follow up
14. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients ICE

Palpitations

Areas to focus on: Cardiac causes: Supra Ventricular Tachycardia, Ventricular ectopic, atrial fibrillation, atrial flutter, sinus tachycardia, thyrotoxicosis, anemia, Anxiety or depression, Drug induced and arrhythmias

1. Introduce yourself and establish good rapport
2. Explore patient's Ideas, Concerns and Expectations (ICE)
3. Identify the complaint (what do you mean by palpitations?): onset (abrupt or gradual), character (fast beat, chest fluttering, skipped beats), course, frequency, duration, rate, rhythm, cessation (how does it end? abrupt or gradual), relieving and aggravating factors (exertion, position or emotional stress), associated symptoms, and red flags:
 - a. Chest pain, shortness of breath (SOB) (Pulmonary Embolism, pericarditis)
 - b. Sweating, tremor, fatigue, weight loss, anxiety, phobia, heat intolerance (hyperthyroidism)
 - c. Sweating, headache, hypertension (pheochromocytoma)
 - d. Sweating, syncope (arrhythmia, pericarditis)
 - e. Chest pain, palpitation, sweating, dizziness (Myocardial Infarction, or Ischemic Heart Disease)
 - f. Excessive worries, poor concentration, fatigue, disturbed sleep, irritability, feeling anxious (Generalized Anxiety Disorder)
 - g. Low mood, loss of interest, other somatic symptoms (depression)
 - h. Pallor, history of blood loss (anemia)
4. Drugs and stimulant use: tea, coffee (amount?), alcohol, lithium or Tricyclic antidepressant toxicity, thyroxin, ventolin.
5. Past medical and surgical history: cardiac disease, Diabetes mellitus, Hypertension, asthma, depression, insomnia, anemia, thyroid disease
6. Social history: stressful events, effect of the problem on patient's life, smoking, alcohol use
7. Family history of heart disease, anxiety disorder or thyrotoxicosis
8. Management and education:

- a. In case of infrequent palpitations or missed beats with no associated symptoms: reassure and advice patient to avoid precipitating factors.
- b. In case of frequent palpitations with chest pain or SOB: patient needs detailed assessment and referral.

Examination: General exam for any signs of anemia, thyroid disease. Check pulse, and heart sounds (refer to cardiovascular system examination station)

Order required investigations: Electrocardiogram, Thyroid stimulating hormone, Complete Blood Count, Holter monitor

Give reading educational materials if any

Discuss health maintenance and screening for age

Arrange for follow up

Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patient's ICE.

Breast lump

1. Introduce yourself
2. Establish good rapport
3. Explore patient's Ideas Concerns and Expectations
4. Identify the complaint
 - a. Consider patient's age: carcinoma is more likely around and after the menopause, whereas fibroadenoma is more common in young women.
 - b. Ask: "When and how did you first notice it? Any history of previous breast lumps?"
 - c. Duration since onset
 - d. Characteristics of the mass
 - Hard: a discrete lump suggests fibroadenoma if it is solid with a smooth surface, or a fibroadenotic cyst if fluctuant; a poorly defined margin or evidence of tethering suggests carcinoma, or non-infective mastitis
 - Soft: suggests a lipoma or a lax cyst
 - e. Any change in size over time or in relation to the menstrual cycle (fibroadenosis may produce a painful, lumpy breast prior to menstruation)
 - f. Any pain (commonest causes include infection (e.g. acute mastitis, breast abscess) and fibroadenosis (cyclical or acyclic). Uncommon causes include carcinoma or Tietze's disease (idiopathic costochondritis, usually in the second rib)
 - g. Any redness, fever, or discharge.
 - h. Predisposing events: trauma (fat necrosis), breast feeding (mastitis or abscess)
 - i. Any risk factors for breast cancer:
 - Advanced age
 - Overweight or obese
 - Menarche before 12 years of age
 - Menopause after 55 years of age
 - Nulli-parity or age older than 35 years at first delivery
 - High breast density on mammography
 - Prior thoracic radiation exposure
 - BRCA1 or BRCA2 mutation

- First degree relative with breast or ovarian cancer

Drug and stimulants use: hormone therapy or oral contraceptives

Past Medical and Surgical history: history of atypical hyperplasia or lobular carcinoma in situ, One prior breast biopsy (regardless of results), personal history of breast or ovarian cancer

Social history: Alcohol consumption (more than one drink per day)

Examination: (ideally performed the week after menses when the breast tissue is least engorged).

- The breasts should be inspected for asymmetry; nipple discharge; obvious masses; and skin changes such as dimpling, inflammation, rashes, or retraction of the nipple.
- If there is any mass, comment on: size, site (which quadrant is it in), consistency, borders, mobile or fixed, overlying skin changes.
- With the patient supine and her arms overhead, palpate the breast tissue, including the nipple areolar complex. Check the nipple for any discharge (squeeze the nipple gently). A commonly described method for clinical breast examination emphasizes using the pads of the middle three fingers, moving in dime-sized circular motions while applying light, medium, and deep pressure at each point along a vertical strip pattern.
- Examined the axillae, supraclavicular area, chest wall, also check for hepatomegaly.

Management and education:

- Explain to the patient:

- Breast lumps are very common in women and cause considerable anxiety. However, most are benign, that is, not cancerous. Some women have naturally lumpy breasts due to the nature of their breast tissue and this is usually no reason for concern. In many instances the lumps turn out to be areas of thickening of normal breast tissue.
- According to figures from breast clinics the three most common causes of breast lumps are:
 - Fibrocystic disease (also known as: mammary dysplasia or Fibroadenosis): 32%
 - Fibroadenoma: 23%. "Breast mouse", which is a smooth, discrete breast lump consisting of fibrous

and adenomatous [glandular] tissue.

- Cancer: 22%.
- Others: simple cysts, fat necrosis, milk (lactation) cysts, papilloma of the duct and mammary duct ectasia.

b. Analgesia: for painful breast

c. Refer the patient urgently:

- + If has history of breast cancer
- + If suspicious symptoms (unilateral symptoms, nipple distortion, persistent skin changes, bloody discharge)
- + If after menopause
- + If she is 30 years old or above with a discrete lump that persists after her next period
- + If she is below 30 years old, with:
 - A lump that enlarges
 - A lump that is fixed and hard
 - Other reasons for concern such as family history
- + If male, especially when he is 50 years old or above with a unilateral, firm subareolar mass with or without nipple distortion or associated skin changes

d. Consider non-urgent referral in:

- * Patients below 30 years old with a lump
- * Patients with breast pain and no palpable abnormality, when initial treatment fails and or with unexplained persistent symptoms. (Use of mammography in these patients is not recommended.)

10. Order required investigations (BRCA gene, Ultrasound, Mammography, fine needle aspiration)

11. Give reading educational materials if any

12. Discuss health maintenance and screening for age

13. Arrange for follow up

14. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening and reflection on patient's idea, concern and expectations.

Back pain

Areas to be focused on as below but differentiate: acute back pain is less than 3 months, while chronic low back pain: lasting more than 3 months.

1. Introduce yourself.
2. Establish good rapport.
3. Identify the complaint:
 - a. Location, severity (1-10 scale), onset (gradual, sudden), duration, character (burning, sharp, constant, intermittent), radiation, associated symptoms, progression, exacerbating and relieving factors.
 - b. Red Flags: Age more than 50yrs, history of fall from a height, motor vehicle crash, heavy lifting in osteoporotic patients, major or progressive motor or sensory deficit, new-onset bowel or bladder incontinence or urinary retention, loss of anal sphincter tone, saddle anesthesia, history of cancer metastatic to bone, and suspected spinal infection), fever, pain at rest or night, immunosuppression, unexplained weight loss, dermatome rash, abdominal pain or pulsatile mass.
 - c. Classify accordingly:
 - Compression fracture: point tenderness at spine level, pain worsens with flexion, and while pulling up from a supine to sitting position and from a sitting to standing position.
 - Herniated disc: Leg pain is greater than back pain and worsens when sitting; pain from Lumbar 1 to Lumbar 3 nerve roots radiates to hip and or anterior thigh, pain from Lumbar 4 to Sacral 1 nerve roots radiates to below the knee.
 - Lumbar strain: Diffuse back pain with or without buttock pain, pain worsens with movement and improves with rest.
 - Spinal stenosis: pain worsens with standing and walking, and improves with rest.
 - Spondylolisthesis: Leg pain is greater than back pain; pain worsens with standing and walking, and improves with rest or when the spine is flexed.
4. Explore patient's Ideas Concerns and Expectations (ICE) and explore quality

of life (restrictions and absenteeism).

5. Explore ongoing problems: past medical, surgical and social histories.
6. Question use of any regular medication: Opioids.
7. Social and family history: stressful events, marital conflicts, job instability, smoking, sedentary lifestyle, occupational history (any heavy lifting) and alcoholic drinks.
8. Examination: straight leg raise and a focused neuromuscular examination.
9. Investigations as indicated: Complete blood count, C-Reactive protein, Alkaline phosphatase, calcium level (Paget disease), back X-ray (2 views), Magnetic resonance imaging if radiculopathy.
10. Arrange Referral to a spine subspecialist if pain is severe or limits function, pain management and to physiotherapy.
11. Management and education (share diagnosis and prognosis):
 - a. Explain:
 - "Backache is usually caused by minor strains in the muscles or ligaments, but more serious lower back pain is usually result of an injury to one of the many joints at the base of your spine. The joints include the facet joints and discs, which when disturbed can push against painful tissue or nerve roots just behind them. The injury usually happens while bending your spine forwards (flexing it), especially while lifting something heavy."
 - "Never bend forward with your legs straight to perform any task. Avoid lifting anything heavier than 10 Kg. Squat close to the load and keep your back straight. Do not stoop over the load to get a grip and pick it up. Lift using your knees and legs [not your back] as leverage. Keep your back straight, not bent forwards or backwards"
 - "Once you have experienced back trouble, it has a tendency to recur, and so be careful to protect your back."
 - "Adjust your activity to your back discomfort. Take care with posture, making beds and so on."
 - "Avoid fatigue. Ideally you should perform a set of exercises to

- strengthen the muscles of your spine and abdomen."
- "Perform any exercises that do not involve twisting movements or sudden overloading of the muscles. You can walk, jog (avoid hard surfaces) and swim if you can manage them."
- "Avoid sitting for long periods, especially in the car. Your knees should be higher than your hips and your back straight. Maintain the hollow in your back."

- b. Analgesia: acetaminophen, Nonsteroidal anti-inflammatory drugs "change analgesia in future visits if no benefit".
- c. Muscle relaxant (highly recommended within first week of onset of pain and for 7 to 10 days maximum but not for long-term use).
- d. Gabapentin if radiculopathy (short- term).
- e. Advise to avoid bed rest, no twisting or bending, exercises as directed and return to normal activities.
- f. Epidural steroid injections in chronic pain (effect may last up to 3 months).
- g. Weight loss advise if overweight or obese

12. Give reading educational materials including exercise leaflet if any.
13. Discuss health maintenance and screening for age.
14. Arrange for follow up, safety net and reflect on patient's ICE with goal of relieving pain, improving function and reducing absenteeism.

Dyspepsia

Areas to focus on: Gastroesophageal reflux disease, Peptic Ulcer (Helicobacter Pylori, Nonsteroidal antiinflammatory drugs (NSAIDS), Steroids, Stress), Irritable bowel syndrome, Referred pain (Cardiac)

1. Introduce yourself
2. Establish good rapport
3. Explore history of dyspepsia and its differentials
4. Identify the pain and heart burn: duration, site, onset, character, timing, radiation, progression.
 - a. Aggravating factors: heavy and fatty meals, supine or bending, eating or being hungry.
 - b. Relieving factors: rest, analgesia, anti-acid, eating
 - c. Associated with: bloating, irregular bowel habits, vomiting and nausea, acid regurgitation, throat discomfort, change in voice, stressful life events, shortness of breath, or chest pain.
 - d. Red Flags: more than 50 years of age, non-responsiveness to treatment, gastrointestinal (GI) bleeding, melena, weight loss, anorexia, dysphagia, hematemesis, nocturnal pain that wakes the patient from sleep
 - e. Complications: chronic cough, dental erosions, chest pain, change in voice, anxiety or depression
5. Explore patient's and parent's Ideas Concerns and Expectations (ICE), and effect of the complaint on quality of life
6. Explore ongoing problems: Diabetes mellitus, arthritis, pernicious anemia, depression
7. Question regular use of medications: NSAIDS, steroids, aspirin, theophylline, calcium channel blockers, anti-cholinergic, or bisphosphonate
8. Social and family history: smoking, alcohol, family history of GI problem or gastric cancer
9. Examination: abdominal exam (refer to abdominal examination station)

10. Management and education: share diagnosis, and prognosis.
 - a. Non-pharmacological advice:
 - Life style: stop smoking and alcohol, avoid tight fitting clothes, regular exercise, reduce stress, maintain your ideal weight
 - Food: eat healthy food, avoid spicy, fatty and heavy meals, take small frequent meals, moderate coffee amount, avoid eating late at night (ideally no food 3 hours before bedtime), elevate the head of the bed
 - Aggravating drugs: "Avoid drugs that irritate your stomach. Example: steroid, ibuprofen"
 - b. Pharmacological advice: Proton pump inhibitors (PPI) (example Omeprazole: 20 mg, once daily, for 8 weeks, to be taken orally on an empty stomach, delay feeds for 30-60 minutes after the pill)
 - c. Formulate a clear plan: "if you improve, the PPI will be continued as needed (PRN) only (to avoid long term side effects: like iron, vitamin B12 or calcium deficiency). If you didn't improve with the above strategies you will need more investigations to rule out Helicobacter pylori infection with or without endoscopy."
 - d. Safety net: "if you develop black stool, bleeding, chest pain or fast heart beats you need to seek medical attention"
11. Order required investigations (if recurrent): Helicobacter Pylori stool antigen, Complete blood count, endoscopy (to rule out peptic ulcer)
12. Arrange Referral to gastroenterology clinic if red flags found, for Esophago gastroduodenoscopy (EGD)
13. Give reading educational materials if any
14. Discuss health maintenance and screening for age
15. Arrange for follow up in 2 to 4 weeks
16. Communication skills: organized approach, mixed questioning styles, clear language.

Infantile colic

Areas to focus on: infantile colic characteristics (Wessel's Criteria), intussusception, strangulated bowel in view of umbilical hernia, cow milk allergy, parental anxiety, maternal depression, infant abuse.

1. Introduce yourself and establish good rapport.
2. Identify patient complaint: onset (age when the problem first started, time of the day that episodes usually happen), duration (how long has the problem been there, length of the crying episodes), infant's behavior (active baby or lethargic), aggravating and relieving factors, associated symptoms (urine or stool abnormalities, blood in urine or stool, fever, irritability, skin rash, shortness of breath, cyanosis, apnea, vomiting, change in appetite, poor weight gain or weight loss).
3. Does the baby fit the Wessel criteria (rule of 3):
 - a. Child is less than 3 months of age.
 - b. Colic episodes lasts (cumulative) more than 3 hours per day.
 - c. Occurs more than 3 days per week.
 - d. Persists more than 3 weeks.
4. Rule out organic reasons: Hair Tourniquet around fingers or toes, constipation or anal fissure, or signs of otitis media.
5. Rule out red flags:
 - a. Sudden crying, projectile vomiting, absence of bowel motion, rectal bleeding, red currant jelly stool (intussusception, or intestinal malrotation).
 - b. Signs of testicular torsion.
 - c. Signs of intracranial bleeds (Shaken baby syndrome).
6. Explore parent's Ideas Concerns and Expectations (ICE), Family dynamics, how parents deal with the colic, family support or availability of helper if young mother or first child.
7. Past medical history: Prenatal, natal and postnatal, any previous medical illnesses or hospital admissions. Child developmental milestones, vaccinations if up to date.

8. Examination:
 - a. Check weight, height and plot them on the growth chart
 - b. Assessing general appearance, level of distress
 - c. Look for signs of organic causes: fever, ear infection, pulse for tachycardia, hand for hair tourniquet, abdomen for umbilical hernia, distension or tenderness, and genitalia for torsion
9. Order required investigations as indicated (Infantile colic is a diagnosis of exclusion): according to history and physical examination.
10. Management and education:
 - a. Describe condition to parent, explain that cause is unknown, reassurance that colic passes by age of 3-5 months
 - b. Consider potentially soothing measures: Harmless and potentially helpful (Five-S's): Swaddling, Side or Stomach position, Shushing sounds, Swinging, Sucking (Breast Feeding)
 - c. Explain that medications do not help
 - d. If child is not breast fed changing the formula might help
 - e. Maternal diet modification might be helpful too
11. Give reading educational materials if any
12. Discuss health maintenance and screening for age
13. Arrange for follow up and referral if needed
14. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patient's ICE.

Abdominal Pain

Conditions to be considered: Myocardial infarction, perforated viscous, ruptured abdominal aortic aneurysm, ectopic pregnancy, acute pancreatitis, acute cholecystitis, Irritable bowel syndrome (IBS), renal stone, bowel obstruction, diabetic ketoacidosis, Pelvic inflammatory disease, malignancy and somatization disorder.

1. Introduce yourself.
2. Establish good rapport.
3. Identify the complaint: site, onset, character, radiation, duration, timing, progression, relieving and aggravating factors (increases with movement (peritonitis), increases with eating spicy food (gastric ulcer), relieved with eating (duodenal ulcer), increases with fatty meals (cholecystitis), worsen by stress and relieved by defecating (irritable bowel syndrome), associated symptoms such as alternating constipation and diarrhea, mucus or blood in stool, incomplete evacuation or need for digitations that indicate irritable bowel syndrome, heartburn, jaundice).
4. Exclude alarming symptoms such as:
 - a. Pain that awaken patient at night, fever, nausea, vomiting, weight loss, change in bowel habits, anemia and blood in stool that indicate malignancy.
 - b. Abdominal distention, nausea, vomiting, absent bowel motion that indicate bowel obstruction.
 - c. Vomiting and hyperglycemia that indicate diabetic ketoacidosis.
 - d. Rectal bleeding, perianal lesions, joint pain, red eye that indicate inflammatory bowel disease.
 - e. Dysuria, fever, pain radiating to flanks that indicate pyelonephritis.
 - f. Amenorrhea, vaginal bleeding, dizziness that indicate ectopic pregnancy.
 - g. Epigastric pain with hematemesis that indicate acute gastrointestinal bleeding.
5. Effect of problem on quality of life.
6. Explore patient's ideas concerns and expectations (ICE).
7. Explore ongoing problems: exclude DM, Asthma, drugs.

8. Question use of any regular medications [Nonsteroidal anti-inflammatory drugs].
9. Social history: smoking, alcohol, stress, marital conflicts, domestic violence, job instability.
10. Family history: GI cancer, inflammatory bowel disease, celiac disease or rheumatologic disorder.
11. Examination: refer to abdominal examination station.
12. Order required investigations as indicated:
 - a. Complete blood count in case of acute appendicitis, inflammatory bowel disease (leukocytosis, anemia).
 - b. Pregnancy test to exclude ectopic pregnancy.
 - c. Urinalysis to exclude urinary tract infections.
 - d. Computed tomography scan to exclude masses suggestive of malignancy.
 - e. Ultrasound to exclude ectopic pregnancy or bowel obstruction.
 - f. Tissue transglutaminase level to exclude celiac disease.
 - g. Upper or lower GI endoscopy to exclude gastric ulcers, inflammatory bowel disease.
 - h. Fecal occult blood to exclude lower GI bleed.
13. Management and education: discuss nature of problem and the cause. Advise for analgesia (enough dose and right frequency), management option for relapsed acute attack and as maintenance.
14. Arrange referral if indicated.
15. Discuss health maintenance and age appropriate screening.
16. Give reading educational materials if any.
17. Arrange for follow up.
18. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patient's ICE.

Jaundice

Areas to focus on: Hepatitis, hemolysis, acute versus chronic onset, travel to endemic areas, drug users and associated sexual transmitted infections (STIs), History of transfusion, Alcohol consumption. Autoimmune conditions like Primary Biliary Cirrhosis.

1. Introduce yourself and establish good rapport.
2. Identify the complaint (icterus): duration, onset, relieving and aggravating factors, timing, profile (same, improving, worsening), prior episodes.
 - a. Exclude fever, Nausea and vomiting, abdominal pain, diarrhea, recent travel, street food, loss of appetite, in case of acute hepatitis.
 - b. Onset Associated with Upper respiratory tract infections, stress, fasting in case of Gilbert's disease.
 - c. Dyspepsia, weight loss, pruritus, urine and stool color changes, mood swings, in case of Chronic hepatitis, alcohol abuse, liver cirrhosis.
 - d. Autoimmune disease, renal disease, miscarriages, in case of Systemic Lupus Erythematosus or Primary Biliary Cirrhosis.
 - e. Travel to Indian subcontinent or east Asia, in case of sexual tourism to exclude sexually transmitted infections.
 - f. History of a new tattoo or intravenous drug abuse.
3. Explore patient's Ideas, Concerns and Expectations (ICE).
4. Explore on going problems: Glucose-6-phosphate dehydrogenase deficiency, Sickle cell disease, transfusions, chronic Hepatitis B virus (HBV) or Hepatitis C virus (HCV), liver cirrhosis, history of total parenteral use.
5. Inquire about Hepatitis B virus, Hepatitis A virus vaccination status.
6. Question use of regular medications: hepatotoxic drugs.
7. Social and family history: intravenous drug or alcohol abuse, homosexuality, multiple sexual partner, health care professional, hemolytic anemia, mother or spouse diagnosed HBV or HCV, smoking.
8. Examination:
 - a. General: pallor, icterus, thalassemic facies, cachexia, tattoos, injection sites.

- b. Hand: clubbing, flaps, palmar erythema, Dupuytren's contractures.
 - c. Abdomen: gynecomastia, spider nevi, hepatosplenomegally, Murphy's sign, Ascites, ecchymosis.
9. Order required investigations: complete blood count, liver function test, lactate dehydrogenase, hepatitis and human immunodeficiency virus screen, ultrasound or Computed tomography.
10. Arrange Referral: as needed for hemolysis, hepatic failure.
11. Management and education: share differential diagnosis, and prognosis.
12. Give reading educational materials if any.
13. Discuss health maintenance and screening for age.
14. Arrange for follow up.
15. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patient's ICE.

Rectal Bleeding

Areas to be focused on: External or internal hemorrhoids, perianal abscess, anal fissures, anal condylomata, colorectal cancer, inflammatory bowel disease, diverticulitis.

1. Introduce yourself
2. Establish good rapport
3. Identify the complaint:
 - a. Onset, duration, frequency (and relation with bowel movement), aggravating and relieving factors, and associated symptoms: abdominal pain or cramps, change in bowel habit, dizziness, anal discharge and itching, weight loss, urge to defecate, or prolonged straining, digital evacuation.
 - b. Red flags: fever, unintended weight loss, sweating, change in bowel habit, fatigue, Age more than 50 years.
4. Explore patient's Ideas, Concerns and Expectations (ICE)
5. Explore ongoing problems and past medical history : diverticulosis or diverticular bleeding, current pregnancy, diabetes mellitus, hypertension, recent surgical procedures as colonoscopy
6. Medications: Nonsteroidal anti-inflammatory drugs including aspirin and allergies history
7. Family history: Colon cancer
8. Social history: marital state, smoking, alcohol and employment.
9. Examination: Per rectum exam for ulcers, cauliflower-like lesions, fissures, leakage of stool. Refer to abdominal examination station.
10. Investigations: Complete blood count, hematocrit levels, blood typing and cross matching, erythrocyte sedimentation rate, computed tomography scan.
11. Arrange Referral:
 - a. Gastroenterologist for flexible sigmoidoscopy or colonoscopy.
 - b. Emergency department if hemodynamically unstable. Meanwhile

resuscitate (with oxygen and fluid).

12. Management and education (share differential diagnosis):

- Constipation: high-fiber diet, exercise (especially walking), increased water intake and stool softeners (lactulose or polyethylene glycol).
- Hemorrhoids: Common, knobby varicose veins of the rectal or anal area, which can prolapse outside the anus and hang as small grape-like lumps. Caused mostly by constipation, due to excessive straining. Managed by:
 - Rubber band ligation if grades 1 and 2.
 - Rubber band ligation, excisional or stapled hemorrhoidopexy for grade 3.
 - Excisional or stapled hemorrhoidectomy for grade 4.
 - All grade pain: Topical nifedipine and lidocaine cream effective than xylocaine.
 - Cryotherapy, sclerotherapy, and anal dilatation are less effective. (Mounsey, Halladay and Sadiq, 2012)
- Anal Fissure: "A crack or tear at the margin of the anus that extends from the skin into the soft lining of the anus. It can affect all ages and tends to occur in women and infants. The tear, which is generally small, usually develops after stretching of the anus from passing a hard, large stool. It is associated with constipation, multiple pregnancies and Crohn's disease. Anal intercourse increases the likelihood of a fissure. Adults usually recover in about 4 weeks, especially if the fissure is small. More severe cases may not heal without the benefit of a small operation."
 - Management: treat constipation if any, sitz bath, analgesics (aspirin, paracetamol), soothing creams (zinc oxide, petroleum jelly, local anesthesia), botulinum toxin injection into the sphincter, or surgical repair. (Fargo, 2012)
- Diverticular bleeding: "Diverticular disease (also called diverticulosis) is the presence of small blind sacs or pouches called diverticula in the wall of your large bowel (colon). It is related to a lack of fiber in your diet. It rarely causes symptoms and most people have it without knowing. A lack of fiber in the diet can cause you to experience bloating, flatulence (desire to pass wind) and abdominal pains. If infection (diverticulitis) develops, you will experience abdominal pain, usually sharp pain in the lower left half of the abdomen, nausea and fever. These symptoms or any

rectal bleeding require prompt attention by your doctor." (Wilkins, Embry and George, 2013)

- e. Colorectal cancer: It's the abnormal growth of large bowel lining. Management depends on biopsy and grading.
- 13. Give reading educational materials If any.
- 14. Discuss health maintenance and age appropriate screening.
- 15. Arrange for follow up and safety net by asking the patient to come back if bleeding persists.
- 16. Communication Skills: ensure organized approach, mixed questioning style(open and closed ended questions), active listening, clear language and reflection on patients ideas, concerns and expectations.

Enuresis

Areas to focus on:

- Urinary tract infection (UTI), bladder dysfunction, constipation, Diabetes mellitus, hyperthyroidism, Diabetes Insipidus, obstructive sleep apnea, seizure disorder, psychological stress and sexual abuse.
- Enuresis is not diagnosed in children younger than five years; recurrence after at least six months of urinary continence suggests secondary enuresis.
- Diagnostic and Statistical Manual of Mental Disorders (DSM) IV criteria to diagnose enuresis: 5 years old or above child with enuresis 3 times per week or more for 3 months or more.

1. Introduce yourself and establish good rapport
2. Identify the complaint "First I need to ask you few questions to evaluate the problem"
 - How old is the child?
 - Since when? (duration of bed wetting)
 - How often? (Day, night or both)
 - With or without encopresis?
 - Ever attained continence? If yes, then for how long? (primary or secondary, diurnal or nocturnal)
 - "Now I will ask you few questions to check if there is any specific cause that we can treat":
 - Frequency, burning micturition, suggest urinary tract infections
 - Constipation
 - Limp, swallowing difficulty, seizures, suggest neurological problems
 - Polyuria, polydipsia, suggest diabetes mellitus
 - Snoring, apnea, suggest adenoid or tonsillar hypertrophy
3. Rule out child abuse. Ask gently: "psychological disturbances are present in one third of patients with secondary enuresis. Do you think something of this sort could have happened to your child?" "Any new adult or baby at home?" "Who takes care of him?" "Who takes him to school?" "How is his school performance?"

Family history of enuresis. "The condition is more common in patients with a

family history. If one parent affected the child has 40-50% risk. If both it rises to 70%. If a sibling is affected the risk increases as well".

- Fluid intake diary, bladder and stooling diary, frequency and volume chart (records help assess constipation, enuresis severity, and treatment response)
- Red flags: dysuria, genital or rectal pain or discharge, straining to urinate, combined diurnal and nocturnal frequency with enuresis
- Explore patient's and parent's Ideas, Concerns and Expectations (ICE)
- Explore ongoing problems: Chronic medical problem and behavioral problem.
- Question regular use of medications.
- Social and family history: stressful events (newborn, new household, parenteral conflict), Family history of enuresis or Diabetes mellitus.
- Examination: body temperature, blood pressure, growth chart. Ear, nose and throat examination to detect adenotonsillar hypertrophy, abdominal examination to detect abdominal mass, costovertebral angle tenderness, hypospadias or epispadias, meatal stenosis, and labial adhesions, rectal examination to evaluate perianal sensation and rectal sphincter tone. Look for perianal excoriation and vulvovaginitis (as a sign of sexual abuse), focused neurological evaluation, including gait, muscle tone, strength.
- Order required investigations if indicated only: Urinalysis, urine culture, blood count, glucose level, thyroid stimulating hormone, Imaging studies (renal and bladder US, voiding cystourethrography), urodynamic studies.
- Arrange Referral if indicated.
- Management and education: share diagnosis, and prognosis
 - Reassure family in case of primary enuresis "Enuresis is a common problem. 15% of 5 years old children have it. However, 15% of those suffering the problem grow out of it each year so that by age of 14 years only 1-2% still have it.
 - Bed alarm with or without star chart
 - The following interventions have some evidence to improve enuresis.

If it does not work after a 3 months trial, stop and shift to another intervention, repeat if needed. Avoid juices after dinner, encourage voiding at midnight, positive reinforcement.

d. Pharmacological therapy: oral desmopressin (not nasal, as the latter causes hyponatremia, only for 7 years and older).

15. Give reading educational materials if any.

16. Discuss health maintenance and age appropriate screening

17. Arrange for follow up.

18. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patient's ICE.

Child with Anal Itch or Pinworm

Areas to focus on: pin worms, child abuse

1. Introduce yourself and establish good rapport
2. Identify the complaint:
 - a. Character (history of anal itching at day or night), onset, duration, site, relieving and aggravating factors (worse at night), associated symptoms (constipation, diarrhea, insomnia, irritability, or restlessness), complications (infected skin around the anus, from constant scratching), abdominal pain
 - b. Rule out differential diagnoses: dysuria, urinary frequency, vaginal discharge if female, perianal abscess, other areas that itch (scabies), abdominal pain, nausea, or child abuse (the main questions for child abuse: "Did you notice any behavioral changes in your child? sleep? appetite?" "Who takes him to school? ...Other adults living in the house?")
 - c. History of previous episodes of pinworm infection? treated with one dose of medication or not? what treatment was given? similar complain in the family?
3. Explore parent's Ideas, Concerns, Expectations (ICE), effect of the complaint on quality of life : "How does the problem affect you and your child?", "Has the problem affected his attendance at school or day care?", "Does anyone at home suffer from similar problems?"
4. Explore ongoing problems: any developmental problems, or history of anemia.
5. Question regular use of medications and allergies if any
6. Social and family history: similar complain in the family, washing hands, other hygiene measures, eating nails in child or other family members.
7. Examination: vitals, abdominal examination (any tenderness), and anal examination (look for itch marks, adult or ova of pin worms). Check for ova after one hour from sleep. "Scotch tape test": applying an adhesive tape on the skin around anus first thing in the morning to check for ova.

8. Order required investigations: If recurrent infection, Complete blood count for anemia

9. Management and education:

- Explain the diagnosis: "Pinworms are tiny white worms that are about one cm long. They more commonly infect children from all socio-economic groups, especially school aged, although they can infect adults, as they are highly communicable. Human to human spread is favored by close, crowded living conditions. Spread among family members is common. Pinworms eggs can survive on the surface of clothes, bedding and toys for about 2-3 weeks. Pinworm infections are easy to treat, and the pinworms go away. Because pinworm infections are highly contagious, it is NOT UNUSUAL for infection to recur. If the symptoms recur, should call a doctor and be treated again".
- Advice:
 - Hand hygiene, practiced by the patient and his family, is more important than drugs (especially if recurrent).
 - Child to wear tight pants especially at night. All underwear and pajamas should be washed immediately or the same day, don't keep them to pile in the in basket because worms can live outside the body.
 - After waking from sleep wash the anal area and hands very well.
 - Avoid eating nails and trim nails regularly.
 - Wash bed lining daily for two weeks for the whole family.
 - Avoid sharing towels, and wash them regularly.
 - Clean toilets daily.
 - School should instruct teachers to observe any child with itching and toilet hygiene.
- Pharmacological treatment:
 - Two doses of mebendazole or albendazole in Two weeks interval. First dose to kill the worms, and the second dose to kill the eggs (eggs will hatch within 2 weeks) (Side effects: gastrointestinal upset, Abnormal liver function test, rash). Mebendazole and albendazole are not recommended for children below 2 years of age.
 - Ideally family members should also get the same treatment (Mebendazole is safe after the age of two years but not safe for pregnancy or lactation (category C).
Piprazine is used when child is above three months of age.

- If mother is pregnant: give her strict hygiene advice for 6 weeks (life cycle of the worm is six months).
- Itching ointment and creams are available for relief from itching

10. Give reading educational materials if any
11. Discuss health maintenance and age appropriate screening
12. Arrange for follow up, referral if needed
13. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patient's ICE

Female with Dysuria

Areas to focus on: Urinary tract infection (UTI), atrophic vaginitis, urethral syndrome, vaginal infection, abuse and depression.

1. Introduce yourself.
2. Establish good rapport.
3. Identify the complaint: duration, site, onset, character, relieving and aggravating factors. Timing (relation to sexual activity), radiation, associated symptoms (frequency, hematuria, back, flank or suprapubic pain, fever, vaginal discharge, dyspareunia, depression), risk factors (pregnancy, catheter use, elderly, anatomical urogynaecological or urological abnormalities) red flags (exclude pyelonephritis, sepsis: high grade fever, intolerance to oral feeds, sever pain).
4. Explore patient's ideas, concerns, expectations (ICE), and effect of the complaint on quality of life.
5. Explore ongoing problems: past medical history (diabetes mellitus, ureteric stones), recurrent UTI or Cystitis.
6. Question any regular of medications.
7. Social and family history: Marital status, risk of Sexual transmitted infections, Abuse, Domestic Violence.
8. Examination: Vitals for any sign of sepsis, Palpate kidneys and lower abdomen, vaginal examination.
9. Order required Investigations: urine dipstick and culture, vaginal swabs, Kidneys ureters and bladder x-ray, Serum creatinine.
10. Arrange referral if needed.
11. Management and education (share diagnosis, and prognosis): antibiotics, analgesics, increase fluid intake, Void after intercourse, proper perineal washing technique. Avoid spermicides. Avoid vaginal douche.
12. Give reading educational materials if any.

13. Discuss health maintenance and screening for age.
14. Arrange for follow up.
15. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patient's ideas, concerns and expectations.

Recurrent Urinary Tract Infections In Women

Areas to focus on: Acute pyelonephritis, atrophic vaginitis, bladder cancer, cystitis, genital herpes, interstitial cystitis, irritant cystitis, STI, overactive bladder, urethritis, vaginitis.

1. Introduce yourself.
2. Establish good rapport.
3. Identify the complaint:
 - a. Onset, duration, frequency, hematuria, fever, abdominal pain, absence of vaginal discharge, use of spermicide.
 - b. Associated symptoms: relation to sexual activity, fever, nausea & vomiting.
 - c. Elaboration on recurrence: frequency, previous treatment duration, previous investigation, pelvic infections, risk factors: new sexual partner, frequent sexual activity.
 - d. Drug history.
 - e. Predictors of recurrent UTIs include symptoms following intercourse, signs or symptoms of pyelonephritis, and prompt resolution of symptoms with antibiotics.
4. Explore patient's ideas, concerns and expectations.
5. Past medical and surgical history: chronic diseases: diabetes, renal disorder (congenital, polycystic kidney, reflux, stones), incontinence, neurological disorder, pelvic procedures, immunosuppressant medications use.
6. Family and social history: maternal history of UTI, marital status, partners view on her symptoms.
7. Examination:
 - a. Assess vitals for fever, dehydration signs.
 - b. Abdomen: refer to abdominal examination station; exclude suprapubic or costovertebral angle tenderness.
 - c. Pelvis: to exclude signs of vaginitis, cervical motion tenderness (which suggests pelvic inflammatory disease).
8. Order investigation as indicated: Urinalysis, urine culture, X-ray kidney.

ureter and bladder (KUB) to rule out anatomical or structural abnormality, renal function test, and glucose level to exclude diabetes.

9. Management:

- Start empiric antibiotics if new attack: nitrofurantoin for 7 days or three days of trimethoprim or a fluoroquinolone or ciprofloxacin
- Discuss preventive factors such as: increased fluid intake, postcoital voiding, avoid delayed voiding, cotton undergarments, wiping pattern (from the front to the back passage) and Cranberry products seem to notably reduce the recurrence of symptomatic cystitis, although there is no clear evidence about dosage or duration of use
- Prophylactic antibiotics: If 2 UTIs in the previous year, continue antibiotics for 6-12 months. Postcoital prophylaxis may be preferable in women with UTIs temporally related to intercourse.
- Elaborate on risk factors of recurrence: frequent sexual activity, new sexual partners, and spermicides usage.

(Kodner, Gupton, 2010, AAFP)

10. Give reading educational materials if any

11. Discuss health maintenance and screening for age

12. Arrange for follow up in 2-3 days or earlier if fever, nausea or vomiting.

13. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients ICE.

Male with Dysuria

1. Introduce yourself, and establish good rapport
2. Asks about main presenting complaint using open questions
3. Explore patient's Ideas, Concerns and Expectations (ICE)
4. Explore details of symptoms:
 - a. Frequency and pattern
 - b. Associated symptoms: urgency, hesitancy, fever, hematuria, abdomen or pelvic pain, nocturia, hesitancy and terminal dribbling, poor stream, incontinence, weight loss or anorexia, urethral discharge, testicular masses or testicular pain
 - c. Sexual dysfunction, sexual contacts: presence of symptoms in partners
5. Past medical history, social and family history
6. Home Medications and Allergies to antibiotics if any
7. Examination:
 - a. Abdominal exam, palpate kidneys, inguinal adenopathy
 - b. Genital exam: penile ulcers or discharge, scrotal swelling or tenderness(epididymitis), tender Per rectum exam (prostatitis)
8. Order required investigations: Urine dipstick, Urine culture, or urethral discharge culture if present, and serum creatinine.
9. Management and education:
 - a. Share diagnosis, and prognosis.
 - b. Medications: Antibiotics and analgesic. Prophylaxis Antibiotics if needed-
 - Chlamydia coverage: Azithromycin 1 gram orally for 1 dose or Doxycycline 100 mg orally twice daily for 7 days.
 - Gonorrhea coverage: Ceftriaxone 250 mg IM.
 - Recurrent symptoms with same partner (cover Trichomonas and Ureaplasma):
 - Drug 1: Metronidazole 500 mg orally daily for 5 days AND

- Drug 2: Choose one of the following:
Azithromycin 500 mg orally once daily for 5 days
or Doxycycline 100 mg once daily for 7 days
- c. Self care and prevention: increase water intake to 2-3 liter per day, schedule frequent voiding (before sleep, after intercourse), practice safe sex

10 Give reading educational materials if any

11 Discuss health maintenance and screening for age

12 Arrange for follow up

13 Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patient's ICE.

Hematuria

Areas to focus on:

- Gross hematuria:** red or brown urine
- Microscopic hematuria:** more than or equal 3 RBCs per high power field.
- Urine dipstick are as sensitive as urine sediment examination
- Rule out malignancy is curtail in cases presenting with hematuria

1. Introduce yourself

2. Establish good rapport

3. Identify the complaint:

- Onset, duration, character, relieving and aggravating factors. Timing (relation to sexual activity), associated symptoms (frequency, dysuria, urgency, backache, flank or suprapubic pain, fever, vaginal discharge, dyspareunia, depression)
- Clues suggesting a particular diagnosis?
 - Concurrent pyuria and dysuria: Urinary tract infections (UTI) or bladder malignancy.
 - A recent Upper respiratory tract infections: Post-infectious glomerulonephritis, Immunoglobulin A (IgA) nephropathy or hereditary nephritis.
 - Recent vigorous exercise or trauma in the absence of another possible cause
 - Unilateral flank pain, which may radiate to the groin: Urinary obstruction due to a calculus, blood clot or malignancy.
 - Symptoms of prostatic obstruction in older men such as hesitancy and dribbling: Benign prostatic hyperplasia
 - History of a bleeding disorder or bleeding from multiple sites due to excessive anticoagulant therapy. However, it should not be assumed that hematuria alone can be explained by chronic warfarin therapy
 - Cyclic hematuria in women that is most prominent during and shortly after menstruation: Endometriosis of the urinary tract
 - Contamination with menstrual blood is always a possibility.



positive result

and should be ruled out by repeating the urinalysis when menstruation has ceased.

hematuria →

- Travel or residence in areas endemic for *Schistosoma haematobium* or tuberculosis.
- Sterile pyuria with hematuria, which may occur with renal tuberculosis, analgesic nephropathy and other interstitial disease

urinary then
beat after

- Flank pain that is persistent or recurrent: Loin pain-hematuria syndrome (rare)

c. Ask about risk factors for malignancy

- Age more than 35 years old
- Smoking history, more risk with more exposure
- Occupational exposure to chemicals or dyes (benzenes or aromatic amines), such as printers, painters, chemical plant workers
- History of gross hematuria, chronic cystitis or irritant voiding symptoms, pelvic irradiation, exposure to cyclophosphamide, chronic indwelling foreign body, or analgesic abuse (which is also associated with an increased incidence of carcinoma of the kidney) (Marc E De Broe, 2014)

days

- Explore patient's Ideas, Concerns and Expectations (ICE), and effect of the complaint on quality of life
- Explore ongoing problems: past medical history (Diabetes mellitus, ureteric stones), recurrent UTI or cystitis
- Surgical history: recent cystoscopy, gynecologic procedure
- Question use of regular medications (especially those that are known to cause nephritis)
- Social history: consider intimate partner abuse
- Family history: any renal disease (as in hereditary nephritis, polycystic kidney disease, or sickle cell disease (black patient), coagulation disorder)
- Examination: blood pressure, palpate kidneys and lower abdomen, vaginal examination to assess vaginitis and vaginal bleeding, rectal exam for males to assess prostate size

11. Order required investigations:

a. Evaluation of upper urinary tract

- Intravenous urography: Define anatomy, low cost and available, limited sensitivity for small masses, exposure to contrast media, follow up with Ultrasound or Computed tomography may be needed
- Ultrasonography: least expensive and safest choice, evaluation during pregnancy, good for masses larger than 3 cm
- Computed tomography: high sensitivity for identifying renal calculi, small renal masses. Preferred initial imaging modality.

b. Evaluation of lower urinary tract

- Urine cytology, urinalysis and culture
- Cystoscopy (McDonald, Swagerty and Wetzel, 2006)
- Prostate specific antigen if prostate cancer is probable

12. Arrange referral if needed

Management and education (share diagnosis, and prognosis):

- a. Increase fluid intake (at least 2-3 Liter per day)
- b. Void after intercourse
- c. Antibiotics if infection is suspected
- d. Explain to the patient, if applicable:
 - "Kidney stones are hard lumps that your body makes from waste products in your urine, if these lumps are big enough they can get stuck in your bladder or urinary tract. This can be very painful!"
 - "You might be able to pass the stone in your urine if it is small enough, your doctor can give you medicine to help with the pain, if the stone is too big, your doctor can use a machine that breaks the stone into smaller pieces" (Pietrow, 2006)

13. Give reading educational materials if any

14. Discuss health maintenance and age appropriate screening

15. Arrange for follow up or referral as needed

Communication skills: organized approach, mixed questioning styles (open

and close ended questions), active listening, clear language, and reflection on patient's ICE.

Vaginal Discharge

Areas to focus on: candida infection, bacterial vaginosis, trichomonas vaginalis, chlamydia and gonorrhea, Pelvic inflammatory disease (PID)

1. Introduce yourself
2. Establish good rapport
3. Identify patient complaint: onset, duration, description (amount, color, appearance, odor, and consistency). Work out your differentials accordingly:
 - a. Candida (thrush) most common: white; thick; lumpy; cheese like discharge
 - b. Bacterial vaginosis: milky or off-white discharge, fishy odor, burning or itching
 - c. Trichomonas vaginalis: copious, foamy greenish-yellow discharge, offensive odor, vulvar congestion, erythema with pruritus vulvae
 - d. Chlamydia or Gonorrhea: asymptomatic or purulent vaginal discharge, pelvic pain (PID), and joint pain
 - e. Any associated blood or discharge
 - f. Associated symptoms:
 - Dysuria (Urinary tract infection)
 - Pruritus, abdominal and pelvic pain (irritable bowel syndrome, constipation, endometriosis)
 - Dyspareunia, fever or skin rash (toxic shock, staph infection due to tampons use)
 - Altered bleeding pattern (side effect of hormonal method of contraception: Combined oral contraceptive pill, progestrone pills, Injectable Depo-Provera implant or Intra uterine device (IUD))

Identify the etiology

- a. Menstrual history and Last menstrual period
- b. Relation to menstrual cycle (mid-cycle discharge (sticky like mucus))
- c. Relation to pregnancy
- d. Relation to intercourse
- e. Sexual history: Symptoms in the partner, history of multiple sexual partners, history of sexual transmitted infections (STI) or similar history of discharge, fever and possibility of PID
- f. Use of allergen as vaginal douches, soap, bubble bath, spermicidal

foam jelly or creams use of tampons, pessaries or condoms

5. Explore ongoing problems: Diabetes mellitus as a risk factor
6. Question use of any regular medication: use of contraception (pills, IUD), steroids, antifungals and antibiotics (risk factors)
7. Social and family history: possible exposure to STI
8. Explore patient's Ideas Concerns and Expectations, and effect of the problem (physical, social and psychological)
9. Examination: Skin, oral mucosa, abdomen, joints, genitalia (discharge characteristics, adnexal tenderness), rectum
10. Order required Investigations as indicated:
 - a. High vaginal swab for wet mount or Whiff test, endocervical swab, urine for chlamydia, gonorrhoea PCR:
 - Candida: normal vaginal pH, negative Whiff test, wet mount with Potassium hydroxide (KOH) shows *Alka* *airc* *cells* (budding yeast cells)
 - *←* *Bacterial vaginosis*: vaginal pH more than 4.5, positive Whiff test, wet mount shows *clue cells* (epithelial cells coated with coccobacilli)
 - Trichomonas vaginalis: vaginal pH more than 4.5, variable Whiff test, Wet mount shows more than 10 White blood cells per high power field (WBC HPF) and motile flagellates
 - b. Investigations to rule out other causes if needed: blood sugar and urinalysis for diabetes, midstream urine for UTI, Serum follicle stimulating hormone (FSH) and estradiol for estrogen deficiency (peri-menopausal, inadequate hormonal replacement therapy)
11. Arrange referral if needed
12. Management and education
 - a. Candida: clotrimazole (canesten) 500 mg pessary or nystatin two pessaries at night for two weeks
 - b. *Bacterial vaginosis*: Metronidazole (Flagyl) 500 mg twice daily for seven days (Avoid concomitant use with alcohol (if within 24 hours, may develop headache, flushing, vomiting, psychotic symptoms) or

- disulfiram (if within two weeks)
- c. Trichomonas vaginalis (treat sexual partner): Metronidazole 500 twice daily for seven days or 2 g single dose
- d. Chlamydia (treat sexual partner and treat for Gonorrhea concomitantly): Azithromycin 1g single oral dose or doxycycline 100 mg twice daily for seven days
- e. Gonorrhea (treat for Chlamydia concomitantly): single dose of Ceftriaxone 250 mg intramuscular (IM) plus single oral dose of azithromycin 1g or doxycycline 100 mg twice daily for seven days
- f. Advice on wearing cotton underwear, pad changing, wash cotton underwear with hot water
- g. Red flag: failure of initial treatment, pelvic pain, systematic symptoms (fever, nausea, vomiting)

13. Give reading educational materials if any

14. Discuss health maintenance and screening for age

15. Arrange for follow up

16. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patient's ICE.

Sexual History

Areas to focus on: exclude depression, correct misconceptions about normal sexual cycle or effects of chronic conditions and aging on the sexual health

1. Introduce yourself
2. Establish good rapport
3. Identify the complaint: "I understand that talking about sexual problems can be uncomfortable for you. However, I need to ask you few questions to be able to help you". "I assure you that I will maintain your confidentiality all through".
 - a. Clarify the complaint (example. "What do you mean by weakness?") And repeat it in clear, scientific terms (example. "I see, so you have difficulty developing penile erection long enough to complete penetration")
 - b. Onset, duration, and timing:
 - "Have you always had this problem or is it recent?"
A recent onset suggests psychogenic etiology while a lifelong problem might be organic
 - "Does the problem happen all the time or only sometimes?"
Generalized or situational (related to the partner or the place)
 - c. Any relieving or aggravating factors.
4. Explore patient's Ideas, Concerns and Expectations (ICE):
 - a. Fears, peer or family pressure.
 - b. Explore partner's opinion about the same problem too.
 - c. "Do you think there is a solution?"
 - d. "How motivated are you to solve this problem?"
 - e. "Any specific treatment you have in mind?"
 - f. "Is your partner motivated to solve this problem with you?"
5. Describe the sexual activity
 - a. Source of their sexual background, literacy : "Patients come from different backgrounds with different sexual beliefs. Where did you get yours from?"
 - b. Frequency: "How often do you have sexual intercourse per week?"
 - c. Initiation: "Who usually initiates the process, your partner or yourself?"

d. Earlier experience (masturbation or previous partners)

e. "Can you please describe your sexual activity to me": explore the patient's and partners sexual cycle:

- * Desire: "Do you or your partner feel like you want to have sex?"
- * Arousal. (female "Do you have vaginal lubrication?" male "Do you have penile erection that is long enough to complete penetration?")
- * Orgasm: (female "Do you reach a point of maximum happiness or develop vaginal contractions?" male "Do you ejaculate?"). If it does not occur with current activity ask if it occurs with masturbation.
- * Resolution

5. Explore ongoing problems:

- a. Diabetes mellitus, Hypertension, Coronary artery disease, Asthma, Arthritis, Menopause.
- b. Operations, Obstetric and Gynecological problems
- c. Depression, sleep, mood, appetite

7. Question regular use of medications: Viagra, testosterone, Oral contraceptive pills

8. Social and family history:

- a. "How long have you been married?" "Have you been living together?"
- b. "How do you describe your intimate relation with your partner?"
- c. "Do you have any children? How many?"
- d. Occupation and job satisfaction
- e. Alcohol, smoking, extra-marital affairs, relationships before marriage.
- f. Family, financial problems

9. Examination: As indicated by the history

10. Order required investigations: as indicated by the history

11. Arrange Referral: If underlying condition requires

12. Management and education: share differential diagnosis, and prognosis.

- a. Female's sexual dysfunction:

- Desire disorders: either hypoactive sexual desire dysfunction (non-responsive), or aversion disorder (avoidance): treatment: partners add intimacy, perform foreplay, eliminate routine, and communicate about sex.
- Pain disorders:
 - Superficial dyspareunia (with attempted penetration): cause is either anatomical or irritation (screen for infections and do anatomical studies) treatment: relaxation, Cognitive behavioral therapy (CBT) and sensate focus
 - Deep dyspareunia (with thrusting, fast penile movement in the vagina): cause is either Irritable bowel syndrome or adhesions.
- Arousal disorder (absence of vaginal lubrication, intermediate dyspareunia) treatment: vaginal lubricants, CBT and sensate focus
- Orgasmic disorders treatment: Fantasizing, Kegel exercises, CBT and sensate focus

b. Male's sexual dysfunction:

- Desire disorder treatment: CBT and sensate focus
- Arousal and Orgasmic disorders:
 - Organic (no anatomical problems if normal morning erection)
 - Premature ejaculation treatment: squeeze technique, CBT and sensate focus

c. Non-gender related: treat psychological and systemic diseases

13. Give reading educational materials if any

14. Discuss health maintenance and age appropriate screening

15. Arrange for follow up

16. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patient's ICE.

Erectile Dysfunction or Impotence

The majority of impotent patients do not complain directly from impotence. Candidate needs to suspect the hidden agenda from the patient's verbal and non verbal cues, e.g. patient may ask for vitamins or any other tonics, or he may complain of backache or psychological symptoms.

1. Introduce yourself
2. Establish good rapport
3. Details of the complaint:
 - a. Onset (gradual or sudden) and course (static or progressing) of the impotence
 - b. Degree of dysfunction (chronic, occasional or situational)
 - c. Early morning and nocturnal erection (present or absent)
 - d. Degree and part of sexual cycle affected: desire, arousal, orgasm
 - e. Is there another sexual partner or wife? and is the problem the same with her?
 - f. Precipitating factors:
 - Is the marriage stable and happy?
 - Does the wife contribute to the problem?
 - g. Associated symptoms:
 - Gynecomastia, loss of secondary sexual characteristics
 - Presence of visual or neurological symptoms
 - Psychosocial history: depressive symptoms
 - h. Previous treatment for this problem
4. Explore ongoing problems and risk factors:
 - a. History of diabetes, hypertension, dyslipidemia, renal failure, hepatic cirrhosis, neurologic disease (like multiple sclerosis), thyroid dysfunction, hypogonadism, hyperprolactinemia.
 - b. History of pelvic trauma, pelvic surgery, or spinal cord surgery
 - c. History of psychiatric illnesses
 - d. History of Alcohol, smoking and intravenous drug abuse
5. Question regular use of medications: Diuretics, antihypertensive, H2 blockers and antidepressant. Ensure compliance to diabetic medications if any to estimate adherence to treatment and level of control.

- a. Any new stressful event
- b. Home environment
- c. Emotional or financial problem
- d. Loss of job or loss of a relative
- e. Drug and alcohol history use if any

7. Explore patient's Ideas, Concerns and Expectations (ICE), effect on patient's life and relation to wife and family

8. Order required investigations: rule out diabetes mellitus, check morning testosterone level (level less than 12 nmol/L directs to hypogonadism)

9. Management and education: share diagnosis, prognosis, and explain:

- a. The relation between control of diabetes mellitus and erectile dysfunction
- b. The management options:
 - Life-style modification: weight loss, exercise, smoking cessation
 - phosphodiesterase type 5 inhibitor (like sildenafil)
 - Vacuum erection device
 - Alprostadil (intracavernous or intraurethral injection)
 - Surgical prosthesis
 - Testosterone therapy for hypogonadism [side effects: fatigue, muscle weakness, mood changes, erythrocytosis (follow up hematocrit) increase prostate size and elevated Prostate Specific Antigen (PSA), may worsen heart disease, migraine and Obstructive Sleep Apnea (OSA)]

10. Discuss health maintenance and age appropriate screening

11. Arrange for follow up

12. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients Ideas, Concerns and Expectations (ICE).

History of Infertility (Female)

Areas to focus on: Poly Cystic Ovarian Syndrome (PCOS), Hypothyroidism, Pelvic Inflammatory Disease (PID), chemotherapy or radiotherapy, marital conflicts, chronic disease or illness and depression.

1. Introduce yourself.
2. Establish good rapport.
3. Identify the complaint, duration (differentiate between primary and secondary infertility).
4. Associated symptoms:
 - a. Gynecology:
 - Menstrual: menarche, date of Last Menstrual Period (LMP), frequency-duration, flow (heavy or light), and pain. History of amenorrhea, secondary dysmenorrhea (endometriosis).
 - Ovarian:
 - Hot flushes, libido changes, nervousness, palpitations (symptoms of premature ovarian failure)
 - Facial hair, acne, obesity, deepening of voice (symptoms of poly cystic ovarian syndrome)
 - Feeling bloating, increase abdominal size (symptoms of ovarian tumor).
 - Uterine: history of pelvic inflammatory disease, or sexually transmitted disease, septic abortion, previous Dilation and Curettage (D&C) [think of Asherman's syndrome] or surgeries (abdominal or pelvic).
 - b. Obstetric: Previous pregnancies, ectopic pregnancy, abortions or complications (Sheehan's syndrome).
 - c. Hypothalamic: stress, diet, weight loss, excessive exercise (eating disorder) or depression
 - d. Endocrine:
 - Hypothyroidism: obesity, cold intolerance, and constipation.
 - Hyperthyroidism: diarrhea, hot intolerance, tremor, sweating.
 - Cushing disease.
 - e. Red flags: delayed puberty, visual disturbances or virilization.

6. Social history.
5. Explore patients Ideas, Concerns and Expectations (ICE).
6. Explore on going problems: Exclude diabetes mellitus, cystic fibrosis, Crohn's disease, tuberculosis, sarcoidosis, malignancy, chemotherapy or radio therapy.
7. Question use of any regular medication: Oral Contraceptive Pills (OCP), anti-hypertensive medications or anti psychotics.
8. Social History: Martial relationship and duration of marriage, sexual activity (frequency). Stressful events, marital conflicts, domestic violence, job instability (hypothalamic), smoking, alcohol or drug abuse.
9. Information about the husband:
 - a. Age, occupation (exposure to toxin, radiation).
 - b. History of previous marriage, children and age of the youngest child.
 - c. Past medical history of mumps, varicocele or undescended testis.
10. Family History: mother and sisters' age of menarche and menopause, menstrual dysfunction, infertility, diabetes mellitus, autoimmune diseases or chromosomal abnormalities.
11. Examination: general appearance (abnormal features: Kallman or Turner syndrome (45, XO), visual acuity and visual field (in suspected prolactinoma), thyroid examination, abdominal and pelvic examinations.
12. Order required investigations:
 - a. Start with partner's semen analysis, and if normal proceed with:
 - b. Blood:
 - * General [Complete Blood Count (CBC), glucose]
 - * Hormones:
 - Beta-HCG ✓
 - Prolactin ✓
 - Follicle stimulating hormone (FSH) and Luteinizing hormone (LH), If both low think of hypothalamic pituitary dysfunction. And if LH:FSH ratio is 3:1 think of poly cystic ovarian syndrome
 - Dehydroepiandrosterone sulfate (DHEAS) and free testosterone (Poly cystic ovarian syndrome)

- 17 hydroxylase deficiency (Congenital adrenal hyperplasia)
- Thyroid Function Test

c. Pelvic ultrasound (uterine congenital anomalies and poly cystic ovarian syndrome)

13. Management and education: share diagnosis and prognosis using simple language. Explain: "the causes include":

- a. Anovulation (Hypothalamic-pituitary axis dysfunction, Asherman's syndrome, premature ovarian failure, poly cystic ovarian syndrome, ovarian tumor)
- b. Fallopian Tube dysfunction (Pelvic inflammatory disease)
- c. Cervical or uterine dysfunction (Sheehan's syndrome) /
- d. Sexual dysfunction (example: Vaginismus) /
- e. Systemic illness (alcoholism, smoking or medications) /
- f. Dysfunction in the spouse (erectile dysfunction, decreased sperm count, varicocele)

14. Give reading educational materials if any.

15. Arrange referral as indicated to gynecological clinic

16. Discuss health maintenance and screening for age: pap smear, mammogram

17. Arrange for follow up.

18. Communication skills: organized approach, mixed questioning styles(open and close ended questions), active listening, clear language, and reflection on patients Ideas, Concerns and Expectations (ICE).

Amenorrhea

Areas to focus on:

Poly Cystic Ovarian Syndrome (PCOS), thyroid disorders, premature ovarian failure, prolactinoma, anorexia nervosa, Hypothalamic-pituitary-ovarian failure, Asherman's syndrome, uterine adhesions after Dilation and Curettage (D&C), post-pill amenorrhea, necrosis -Sheehan's syndrome.

1. Introduce yourself.
2. Establish good rapport.
3. Identify the complaint, onset (differentiate between primary and secondary amenorrhea).
 - a. Physiologic causes: pregnancy and breast feeding
 - b. Gynecology:
 - Menstrual: menarche, date of Last Menstrual Period (LMP), frequency, duration, amount, dysmenorrhea, withdrawal bleeding (think of secondary amenorrhea).
 - Vaginal: monthly dysmenorrhea with no bleeding (imperforated hymen)
 - Ovarian:
 - Hot flushes, libido changes, nervousness, palpitations (symptoms of premature ovarian failure)
 - Facial hair, acne, obesity (symptoms of poly cystic ovarian syndrome).
 - Deepening of voice, clitoromegaly (symptoms of virilization)
 - Feeling bloating, increase abdominal size (symptoms of ovarian tumor).
 - History of mumps (oophoritis).
 - Uterine: Septic abortion, previous Dilation and Curettage (D&C) [think of Asherman's syndrome] or surgeries.
 - c. Obstetric:
 - Pregnancy: nausea, vomiting, frequent urination, breast fullness and fatigue.
 - Previous pregnancies, abortions or complications (Sheehan's syndrome).
 - d. Hypothalamic: stress from job, school or family, dieting and weight loss, excessive exercise (eating disorder) and depression.

- e. Pituitary: headache, visual disturbance or nipple discharge (Prolactinoma).
- f. Other endocrine disorders:
 - Hypothyroidism: obesity, cold intolerance or constipation.
 - Hyperthyroidism: diarrhea, hot intolerance, tremor or sweating.
 - Cushing disease: weight gain, moon face, buffalo hump, striae, fragile skin
 - Congenital Adrenal Hyperplasia (CAD): early puberty, short stature
- g. Medications: question regular use of medications such as:
 - Anti-Hypertensive medications
 - Some antipsychotics and antiemetic medications can increase prolactin level
 - Radiation or Chemotherapy can cause pituitary dysfunction
 - Gonadotropin-releasing hormone (GnRH) analogue decreases estrogen
 - Danazol increases androgen
 - Contraceptives (oral, injectables, implants or intra-uterine devices)

4. Red flags: delayed puberty, visual disturbance, clitoromegaly, virilization or temporal hair loss

5. Explore patients Ideas, Concerns and Expectations (ICE): what has brought her to clinic (perhaps an unwanted pregnancy)

6. Explore ongoing problems: Exclude diabetes mellitus, cystic fibrosis, Crohn's disease, tuberculosis, sarcoidosis, pernicious anemia, myasthenia gravis, malignancy, chemotherapy or radiotherapy.

7. Social History: Stressful events, marital conflicts, domestic violence, job instability (hypothalamic), smoking, alcohol or drug abuse.

8. Family History: mother and sisters' age of menarche and menopause, menstrual dysfunction, infertility, diabetes mellitus, autoimmune diseases or chromosomal abnormalities.

9. Examination:

- General appearance (abnormal features: Kallman or Turner

- syndrome]
- BMI, vitals
- Visual acuity and visual field (in suspected prolactinoma)
- Thyroid examination
- Tanner stage (primary amenorrhea)
- Skin: acne, hirsutism (virilization)

10. Order required investigations (tailored according to history and physical examination)

- a. Blood:
 - General: Complete Blood Count (CBC), glucose level
 - Hormones:
 - Beta-HCG
 - Prolactin (prolactinoma)
 - Follicle stimulating hormone (FSH) and Luteinizing hormone (LH), if both low think of hypothalamic pituitary dysfunction. And if LH:FSH ratio is 3:1 think of poly cystic ovarian syndrome
 - Dehydroepiandrosterone sulfate (DHEAS) and free testosterone (Hyperandrogenism)
 - 17 hydroxylase deficiency (Congenital adrenal hyperplasia)
 - Thyroid Function Test
- b. Pelvic ultrasound (uterine congenital anomalies and poly cystic ovarian syndrome)

11. Arrange Referral to gynecology or endocrinology as necessary

12. Management and education: share diagnosis and prognosis using simple language. Give reading educational materials if any.

13. Discuss health maintenance and screening for age: Pap smear, Human Papilloma Virus (HPV) vaccine, mammogram, colonoscopy, advice regarding weight control, proper diet and exercise.

14. Arrange for follow up.

15. Communication skills: organized approach, mixed questioning styles (open and close-ended questions), active listening, clear language, and reflection on patient's ideas, concerns and expectations (ICE).

Dysmenorrhea

Areas to be focused on are : Primary and Secondary causes of dysmenorrhea. Primary Dysmenorrhea occurs with the absence of underlying pathology. Secondary Dysmenorrhea results from specific pelvic pathology such as endometriosis or adenomyosis.

1. Introduce yourself
2. Establish good rapport
3. Identify the complaint:
 - a. Duration of pain, onset (6 to 12 months after menarche), intensity, radiation, relation to menses, associated symptoms and activity restrictions (social, sport) or absenteeism (school or work).
 - b. Risk factors: Age less than 20 years, null parity, heavy menses, losing weight, anxiety, depression, smoking and disruption of social support.
 - c. Red flags: Abnormal uterine bleeding, menorrhagia, dyspareunia, noncyclic pain, changes in intensity and duration of pain, post-coital bleeding, inter-menstrual bleeding, infertility and abnormal pelvic examination findings that suggest underlying pathology (secondary dysmenorrhea as endometriosis and adenomyosis).
4. Obstetric and gynecological history:
 - a. Age at menarche, regularity of periods, flow (heavy or light), pregnancies, miscarriages.
 - b. Diagnosed gynecological problems, polyps, fibroids, or abnormal Pap smear.
 - c. Sexual activity, sexually transmitted infections.
5. Explore patient's patients Ideas, Concerns and Expectations (ICE).
6. Explore ongoing problems: past medical and social history.
7. Medications and allergy history.
8. Family history: ovarian cancer, endometrial cancer.
9. Social history: marital status, smoking, alcohol, employment, and quality of life.

10. Examination: Per vaginal exam (looking for vaginal discharge or pelvic tenderness) if sexually active or if suspected endometriosis.
11. Investigations: Trans-vaginal ultrasonography (endometrial thickness, masses and ovarian cysts) and complete blood count for anemia (in cases of menorrhagia)
12. Arrange Referral: for endometrial biopsy or laparoscopy if uncontrolled dysmenorrhea.
13. Management and education (share differential diagnosis and reassurance if primary type):
 - a. Explain to the patient:
 - "Dysmenorrhea is the medical term for menstrual cramping, or the pain that many women have just before or at the beginning of their periods"
 - "Menstrual cramps can feel like a dull ache in the abdomen, lower back, hips or inner thighs. The pain may start just before your period or at the beginning of your period and can last 1 to 3 days. The pain may be bad enough to keep you from doing your normal activities"
 - "There are two types of dysmenorrhea: Primary dysmenorrhea is pain caused by common menstrual cramps and Secondary dysmenorrhea is pain caused by a disease or condition, such as infection, ovarian cysts (fluid-filled sacs in the ovary), or endometriosis; a problem with the lining of the uterus" (French, 2005)
 - b. Primary dysmenorrhea: Non-steroidal anti-inflammatory drugs (NSAIDS) [to decrease pain and menstrual flow] or Tranexamic acid [to decrease menstrual flow].
 - c. Endometriosis: first line treatment is with hormonal contraceptives.
 - d. Others: Topical heat, exercise, and nutritional supplementation may be beneficial but no enough evidence to support the use of yoga, acupuncture, or massage.
14. Give reading educational materials if any.
15. Discuss health maintenance and screening for age.
16. Arrange for follow up, safety net and reflect patient's patients ideas.

Concerns and Expectations (ICE).

17. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients ideas, Concerns and Expectations (ICE).

Menorrhagia

(more than 80 mL of blood loss per cycle)

Areas to focus on:

- Unovulatory dysfunctional bleeding: irregular or infrequent periods, with blood flow (light or heavy) caused by hyper-prolactinemia, Poly Cystic Ovarian Syndrome (PCOS) and antiepileptics or atypical antipsychotics.
- Ovulatory dysfunctional bleeding: regular bleeding intervals (every 24 -35 days) caused by thyroid dysfunction, coagulation defects (von Willebrand disease), endometrial polyps, and submucosal fibroids.

1. Introduce yourself
2. Establish good rapport
3. Identify the complaint: Duration of bleeding (more than 7 days), onset, relation to menses, history of passage of clots, frequency of changing pads or tampons, associated symptoms and activity restriction (social, sport) or absenteeism (school or work). Any red flags: (advanced age, obesity, nulliparity, infertility, dyspareunia, diabetes mellitus, family history of colon cancer, long-term unopposed estrogen therapy, or a history of tamoxifen use.)
4. Obstetric and gynecological history: Age at menarche and menopause (for patient herself, her mother and sisters), regularity and nature of her periods, pregnancies, miscarriages. Any diagnosed gynecological problems, polyps, fibroids, abnormal Pap smear (atypia). Sexual activity and sexually transmitted infections.
5. Explore patient's Ideas, Concerns and Expectations (ICE).
6. Explore ongoing problems: past medical (treated anemia) and social history
7. Medications (antiepileptics or atypical antipsychotics) and allergy history.
8. Family history: ovarian cancer, endometrial cancer or bleeding disorders.
9. Social history: marital status, smoking, alcohol, employment, and quality of life.
10. Examination: General (obesity or hirsutism), per vaginal exam (vaginal

discharge or pelvic tenderness) if sexually active or if suspected endometriosis.

11. Investigations:

- a. Child bearing age: Pregnancy test, complete blood count, coagulation profile, Thyroid Stimulating Hormone (TSH), prolactin.
- b. Postmenopausal women: dilatation and curettage.
- c. Endometrial polyps or uterine leiomyoma: saline-infusion, sonohysterography or sonohysteroscopy.
- d. Endometrial biopsy criteria (looking for precancerous lesions and adenocarcinoma):
 - Women 35 years or older with recurrent anovulation.
 - Women younger than 35 years with risk factors for endometrial cancer.
 - Women with excessive bleeding unresponsive to medical therapy.

12. Arrange Referral: endometrial biopsy or laparoscopy.

13. Management and education (share differential diagnosis):

- a. Explain to the patient:
 - "Menorrhagia is periods that are heavier than normal or periods that last for seven days or more each month. Menorrhagia can cause stress for many women. It can also result in anemia. Some women have heavy periods in the years when they first begin their periods or in the years right before menopause."
 - "There are many causes, including hormonal changes or problems with blood clotting. Fibroids or polyps in the uterus can also be a cause. The most serious cause of heavy bleeding is cancer of the uterus. Sometimes no cause can be found. A sample of the uterus may need to be taken to see if you have cells that may lead to cancer. An ultrasound may also need to be done"
 - "There are many treatments available, including hormone pills and surgery. Women who prefer not to take pills can try an intrauterine device (IUD). It contains a hormone called progestin that thins the lining of the uterus to reduce bleeding. This device is placed inside the uterus can

stay in your body for up to five years, and can be easily removed. There are also surgeries to stop the bleeding. These only work for women who do not want to have any more children. These include procedures that freeze or heat the uterus, and hysterectomy (removing the uterus).

- b. Give general advice: Keep menstrual diary. Take iron supplements. Eat well-balanced diet. Avoid aspirin (may increase the bleeding)
- c. If the patient desires fertility with ovulatory bleeding: Non-steroidal anti-inflammatory drugs (NSAIDS), tranexamic acid or levonorgestrel intrauterine contraceptive device.
- d. In unovulatory bleeding (hyperplasia): Oral Contraceptive Pills [OCP] or cycloprogestin 21 days.
- e. In case of ~~undesired fertility~~: endometrial ablation or hysterectomy (definitive).
- f. Others: thyroid dysfunction, coagulation defects (von Willebrand disease), endometrial polyps, and submucosal fibroids.

14. Give reading educational materials if any.

15. Discuss health maintenance and screening for age.

16. Arrange for follow up, safety net and reflect patient's Ideas, Concerns and Expectations (ICE).

17. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients Ideas, Concerns and Expectations (ICE).

Post-Menopausal Vaginal Bleeding

Areas to focus on: exclude endometrial cancer; stop Hormone Replacement Therapy (HRT), risk factors for endometrial cancer, cervical cancer screening status.

1. Introduce yourself and establish good rapport
2. Identify the complaint, duration, onset of bleeding, intensity of bleeds, age at menopause, date of Last Menstrual Period (LMP), associated symptoms (abdominal pain, bowel or urinary problems, weight loss, dyspareunia, post-coital bleeding, pallor, fatigue)
3. Identify risk factors for endometrial cancer: obesity, Diabetes mellitus, hypertension, Chronic un-ovulatory states [Poly Cystic Ovarian Syndrome (PCOS), nulliparity]
4. Obstetric and gynecological history:
 - a. Age at menarche, regularity of periods, parity, miscarriages, breast feeding, sexual activity
 - b. Diagnosed gynecological problems: sexually transmitted infections, polyps, fibroids, abnormal pap smear
 - c. Last pap smear and results
5. Explore patient's Ideas, Concerns and Expectations (ICE).
6. Explore ongoing problems: past medical and social history
7. Question use of any regular medication, allergies, Hormone Replacement Therapy (HRT): duration, type and indication
8. Family history: family history of ovarian, endometrial and or breast cancers
9. Social history: marital status, Smoking, alcohol, employment, quality of life
10. Examination: Per vaginal exam (any atrophic vaginitis, cervicitis, or polyps)
11. Order required investigations: complete blood count for anemia, coagulation profile for bleeding disorder, pap smear, ultrasound for endometrial thickness, endometrial biopsy (if thickness is more than 5 mm)

12. Arrange referral: urgent for work up for endometrial cancer.
13. Management and education: share differential diagnosis, and prognosis.
 - a. Vaginal or cervical: infectious vaginitis or cervicitis (chlamydia, gonorrhea, yeast, trichomonas), Irritative vaginitis (treatment is to avoid use of vaginal washes, apply lubricants), polyps, trauma, condylomata, cancer
 - b. Uterine: fibroids, withdrawal bleed from Hormone Replacement Therapy (HRT) and cancer
 - c. Ovarian: cysts or cancer
14. Give reading educational materials if any
15. Discuss health maintenance and screening for age
16. Arrange for follow up
17. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients Ideas, Concerns and Expectations (ICE).

Depression

Areas to focus on: depression, anxiety, Domestic violence, Abuse, insomnia

1. Introduce yourself.
2. Establish good rapport.
3. Identify the complaint, its onset, and duration, trigger factors. Enquire about [SIGME CAPS]:
 - a. Sleep pattern: trouble falling asleep or sleeping too much.
 - b. Anhedonia: little interest or pleasure in doing things.
 - c. Guilty feelings.
 - d. The mood today and most of the days, any diurnal variation (Feeling down, depressed or hopeless).
 - e. Feeling tired or having little energy.
 - f. Trouble concentrating while reading or watching television.
 - g. Appetite: decreased or increased
 - h. Psychomotor symptoms: Moving or speaking slowly where people could have noticed it or the opposite (restless).
 - i. Suicide or Homicide: Thoughts that you would be better off dead or hurting yourself or others. Ask about any attempts.
 - j. Sexuality: Loss of libido
4. Explore patients Ideas, Concerns and Expectations (ICE): "I can see that this is really difficult for you have you been coping with it all? Any concerns?"
5. Explore ongoing medical problems: diabetes mellitus, hypertension, allergic rhinitis. (Seizures or similar condition)
6. Review of systems: somatic complaint; headache, back pain, shortness of breath, abdominal pain, palpitations...etc.
7. Question regular use of medications: steroids, anti-hypertensive.
8. Social and family history: Triggers as stressful events, marital conflicts, domestic violence, loss of a close person, job instability. History of smoking, alcohol or substance abuse. Any one whom you would open up with this issue? Similar history in the family?

9. Ask about psychological symptoms:
 - a. Anxiety: Feeling anxious or frightened
 - b. Bipolar: Ever felt elated, felt really happy.
 - c. Psychomotor retardation: change in movements or retractions.
 - d. Hallucinations (visual or olfactory) or delusions (guilt or persecution).
10. Arrange Referral: psychotherapy as needed. Admission if suicidal
11. Management and education:
 - a. Share diagnosis (explain to the patient the link between the physical symptoms he or she has with his or her mood)
 - b. Refer to psychotherapy or Cognitive Behavioral Therapy (CBT). Meanwhile advise the patient as follows:
 - Engage in enjoyable activities
 - Exercise
 - Get social support
 - c. Explain to the patient about the medications as follows:
 - Take the medications daily (do not change the dose or stop the medication)
 - Improvement will build up over 2-3 weeks
 - After that medications need to be continued for 6-12 months to prevent relapse
12. Give reading educational materials if any.
13. Discuss health maintenance and screening for age.
14. Arrange for follow up in 1-2 weeks to rule out serotonin syndrome and side effects as follows:
 - night* a. Mirtazapine: sedative, weight gain, sexual dysfunction
 - day* b. Tricyclic Antidepressants (TCA): Excessive sleep, weight gain, drowsiness, prolonged QT interval
 - void* c. Venlafaxine: severe nausea, vomiting, elevated blood pressure (avoid in hypertensive patients)
 - 6 H N* d. Paroxetine: sexual dysfunction, improves premature ejaculation
 - e. Sertraline: diarrhea, insomnia, tremulousness
 - f. Trazodone: sedative, orthostatic hypotension (avoid in elderly)
 - g. Fluoxetine: weight loss, tremulousness
 - h. Bupropion: Agitation, lower seizure threshold (avoid in epilepsy)

patients)

Note: avoid use of antidepressants with anticholinergic effects if patient has Benign Prostate Hyperplasia (BPH), glaucoma or in elderly because of risk of orthostatic hypotension, pupillary dilation and urinary retention.

15. Communication skills: show empathy, organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients ideas, concerns and expectations (ICE).

Anxiety

Areas to focused on: differential diagnosis: anxiety, panic attacks, phobia, depression, cardiovascular disease or hyperthyroidism

1. Introduce yourself, establish good rapport, and encourage patient contribution.
2. Identify the anxiety (AND ITC REST = OSM IV criteria): no control over the worry, duration of anxiety symptoms (more than 6 months) onset (sudden or gradual) course (continuous, episodic or diurnal variation to rule out panic attacks and phobia), relieving or aggravating factors, timing (any change in severity), associated symptoms (irritability, concentration impairment, activity level: retarded or restless; decreased energy, sleep disturbance, tension in muscles, change in appetite or weight, palpitations, trembling, shortness of breath, fear of dying, fear of losing control, paresthesia)
3. Red flags: cardiovascular disease (palpitations, chest pain, paroxysmal nocturnal dyspnea, relation of symptoms to exercise, syncope and irregular beats), Depression (loss of interest, low mood), Hyperthyroid (heat intolerance, excessive sweating)
4. Explore patients Ideas, Concerns and Expectations (ICE), effect of the complaint on quality of life and respond to patient's cues
5. Explore ongoing problems (symptoms of anxiety disorders):
 - a. Psychological (excessive worrying, nervous mood, irritability, disturbed sleep or difficult in concentration)
 - b. Neurological (dizziness, headache, twitching paraesthesia or blurring of vision)
 - c. Cardiovascular disease (palpitation or chest discomfort)
 - d. Respiratory (hyperventilation, breathing difficulty, chest tightness)
 - e. Gastrointestinal (dry mouth, nausea, difficulty swallowing, chocking, abdominal distress or diarrhea)
 - f. Urinary (frequency, urgency), menstrual disturbance or reduced libido
 - g. Others (muscle aches, tension or tiredness)
6. Histories: similar problem, any other psychiatry disease (obsessive compulsive disorder, agoraphobia, social phobia, post traumatic stress disorder), chronic diseases, previous surgeries, medications (Alcohol, drugs,

benzodiazepine withdrawal, caffeine (amount), smoking history), social (Identify stressors: occupation, finances, marital status) and family history (similar problem or any other psychiatry disease)

7. Management and education: share diagnosis, and prognosis. Role of Cognitive Behavioral Therapy (CBT), trial of short acting anxiolytics, role of Selective Serotonin Reuptake Inhibitors (SSRIs), Provision of support and positive re-enforcement.
8. Give reading educational materials if any
9. Discuss health maintenance and age appropriate screening
10. Arrange for follow up
11. Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients Ideas, Concerns and Expectations (ICE).

Obsessive Compulsive Disorder (OCD)

Areas to focus on: major depressive disorder, panic disorder, body dysmorphic disorder, generalized anxiety disorder (GAD), social phobia and simple phobia, attention deficit hyperactivity disorder (ADHD), neurodermatitis, Idiopathic torticollis, substance abuse, eating disorders

1. Introduce yourself
2. Establish good rapport
3. Identify the complaint:
 - a. "Do you suffer from repetitive distressing obsessive thoughts that make you respond in unresisting compulsive ways? Like excessive worry (doubts or superstitious beliefs) about contamination, arrangement or safety such as repeat cleaning, checking things over and over, putting objects on certain positions?"
 - b. Onset, duration, frequency, associated symptoms.
 - c. Check for insight: and recognition of the disorder:
 - Do the thoughts make sense? Do they seem absurd?
 - Are these thoughts yours or someone put them in your mind?
 - Can you resist these un-enjoyable thoughts? What you do to counteract them?
 - Do you feel relieved after responding?
 - Do you feel guilty if you do not do anything toward these obsessive thoughts?
 - How does this affect your life?
4. Explore patient's Ideas, Concerns and Expectations (ICE).
5. Exploration of ongoing problems and red flags:
 - a. Other psychiatric disorders: concern about appearance (body dysmorphic disorder), phobia, GAD, depression, thought insertion or delusional preoccupation (schizophrenia), Tourette's syndrome, bipolar disorder, eating disorder, ADHD
 - b. Red flags: Suicidal ideation
 - c. Previous hospital admission
 - d. Medication trials
 - e. Antecedent infections, especially streptococcal and herpetic infection.

Question regular use of medications

Social History: current or past substance abuse or dependence, any distressing life to the patient and the family, obsessive thoughts about harming self or others, fantasy sexual thoughts

Family history: OCD, Tourette disorder, tics, ADHD or other psychiatric diagnoses.

Examination:

- a. Hair loss related to trichotillomania (compulsive hair pulling)
- b. Eczematous eruptions related to excessive washing
- c. Excoriations related to neurodermatitis (compulsive skin picking)

Management and education:

- a. Cognitive Behavioral Therapy (CBT)
- b. Selective Serotonin Reuptake Inhibitors (SSRIs) is the first line (fluvoxamine, fluoxetine, sertraline)
- c. Tricyclic Antidepressants (TCA)

Refer to psychiatry clinic if symptoms are sever or initial treatment failed.

Give reading educational materials if any

Discuss health maintenance and age appropriate screening

Arrange for follow up

Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language.

Insomnia

Areas to focus on: Anxiety, depression, schizophrenia, hyperthyroidism and jet lag.

1. Introduce yourself and establish good rapport.
2. Identify the complaint: onset; character (is the difficulty with falling asleep, frequent awakening or initiation of sleep, early in morning awakening), relieving and aggravating factors (time, place, surrounding environment, naps and excess caffeine intake):
 - a. Anxiety: nervous mood, excessive worries, irritability, apprehension, difficulty concentrating, palpitations, hyperventilation, and chest pain.
 - b. Depression: low mood, loss of interest, low energy, change in appetite or weight, loss of libido, feeling guilty, and suicidal thoughts.
 - c. Drug or alcohol abuse: Alcohol intake, caffeine, BDZ, barbiturates, antihistamine, decongestants. History of smoking.
 - d. Chronic diseases: cardiovascular disease, Chronic Obstructive Pulmonary Disease (COPD), Gastro Esophageal Reflux Disease (GERD), Thyroid problem, asthma, Obstructive Sleep Apnea (OSA) or pain.
 - e. Explore patients sleeping pattern, environment and rituals if any
 - f. Red Flags: fever, sudden onset sensory or motor deficit, head trauma, sudden onset or worse ever headache, purpuric rash, projectile vomiting, change in headache pattern, altered or loss of consciousness.
3. Explore patients Ideas, Concerns and Expectations (ICE) and the effect of the problem on quality of life (daytime somnolence)
4. Rule out other sleep disorder: parasomnia (narcolepsy or sleepwalking), restless leg syndrome, obstructive sleep apnea (have you ever woke up with shortness of breath or choking sensation?)
5. Explore ongoing problems: diabetes mellitus, hypertension, coronary artery disease (orthopnea, paroxysmal nocturnal dyspnea), Chronic Obstructive Pulmonary Disease (COPD), Gastro Esophageal Reflux Disease (GERD), Urinary Tract Infection (UTI), erectile dysfunction, delirium or pain of any source.

6. Question regular use of medications: anti histamine, decongestants, sedatives (Benzodiazepines or barbiturates), stimulants (Amphetamines or aminophylline).
7. Social and family history: stressful events, marital conflicts, domestic violence, job instability, smoking, caffeine or alcohol use.
8. Order required investigations as indicated
9. Arrange referral: urgently if red flags are present, with or without sleep lab or psychiatry if long standing.
10. Management and education: share management plan and advice on: regular bed and waking time. Avoid watching screens (example: TV) in bed. Prepare for sleep: turn lights off, quiet place, cool temperature and comfortable bed, avoid naps, avoid heavy meals before going to bed, avoid alcohol, avoid caffeine 5-6 hours before bedtime]. Keep a 2-week sleep diary.
11. Give reading educational materials.
12. Discuss health maintenance and screening for age.
13. Arrange for follow up.
14. Communication skills: organized approach, mixed questioning styles (open and close-ended questions), active listening, clear language, and reflection on patients Ideas, Concerns and Expectations (ICE).

Anti-Coagulated Patient With High International Normalized Ratio (INR)

1. Introduce yourself
2. Establish good rapport
3. Explore patient's ideas, concern (risk of future pregnancy if previous deep vein thrombosis or pulmonary embolism was during pregnancy, safety of warfarin during breast feeding, or interactions of warfarin with contraceptives), and expectation (ICE).
4. Details of therapy: reason for anticoagulation (previous deep vein thrombosis, pulmonary embolism, or prosthetic heart valve), duration since initiation of treatment, intended duration of treatment, usual dose used
5. Identify possible causes of high INR:
 - a. Compliance: "Are you taking the medication at the same time every day?"
 - b. Signs of acute illness: fever or diarrhea
 - c. Chronic illnesses: heart failure, chronic liver disease, malabsorption (as in chronic small bowel disease, or patients with history of small bowel resection), vitamin K deficiency
 - d. Medication history:
 - Other anticoagulants as aspirin
 - Any drug-drug interaction: broad-spectrum antibiotic, vitamin E in large doses (>400 mg/day)
 - e. Drug-food interaction: grape fruit, Ginseng tea, fish oil, or garlic
 - f. Consider falsely elevated INR if the test was collected in heparinized tube.
6. Rule out any red flags: skin bruises, epistaxis, gum bleeding, hematuria, hematochezia, or headache with confusion as a sign of intracranial bleeding.
7. Explore continuous problems: past medical (peptic ulcer disease as a predisposing factor for bleeding), surgical, family and social history.
8. Examination: vitals, skin for bruises, chest for adequacy of air entry, lower limb for signs of deep vein thrombosis

Management:

- If the patient has active bleeding:
 - Maintain patient's airway, breathing, and circulation
 - Arrange referral to emergency department after stabilization for fresh frozen plasma (FFP) and intravascular vitamin K regardless of the INR level, as well as for the management of the cause of elevated INR (that is the underlying cause of the active bleeding).
- Measure INR and manage accordingly:
 - INR less than 5: stop the next warfarin dose. Explain to the patient: "Risk of bleeding with this level of INR in otherwise healthy patients is very low". Monitor INR in 24 to 48 hours and adjust the warfarin dose accordingly. Consider reducing warfarin's maintenance dose.
 - INR 5 to 9: stop one to two doses of warfarin or administer 1 to 5 mg of oral vitamin K. Monitor INR in 8 hours and adjust the warfarin dose accordingly.
 - INR 10 to 20: administer 5 to 10 mg of oral vitamin K. Refer to the hospital for admission and INR follow up in 6 hours.
 - INR more than 20: rapid reversal of INR is indicated by administering fresh frozen plasma (FFP) and intravascular vitamin K (slow administration advised to prevent hypotension). Refer to the hospital for admission and INR follow up in 6 hours.

Safety netting: to come back if any signs of bleeding or thrombosis

Give reading educational materials if any

Discuss health maintenance and screening for age

Arrange for follow up

Communication skills: organized approach, mixed questioning styles (open and close ended questions), active listening, clear language, and reflection on patients ICE

Note: Warfarin is teratogenic as it passes the placental barrier. It can also increase the risk of fetal bleeding. Heparin is therefore a better choice in pregnancy. Both Warfarin and Heparin are safe during breast feeding.

Consulting Stations

Breaking Bad News: Diabetes Mellitus

SOY KES

1. Introduce yourself
2. Establish good rapport: "How are you today?"
3. Setting: *privately*
 - a. Close the door, ensure no interruptions (call the nurse and ask her not to allow any interruptions and put your phone on silent) and proper setting (tissue around with some water)
 - b. Ask if any family members are with the patient: "Are you here alone?"
4. Perception: Check using open-ended questions: "Mr. X, how can we help you today?" "Do you know why you are here?" "Do you know what tests you had last time and why were they done?" "Do you have any idea what the results might be?" "Some people like to have someone (family or friend) with them when they receive their results. Are you here alone?"
5. Invite Patient to share in the discussion:
 - a. "Before we review the results, tell me, Mr. X, are you the same person who like to know details or not?"
 - b. "Mr. X, I am afraid I have a bad news"
 - c. "Mr. X, your blood glucose levels are high. I am sorry to tell you, this means that you are diabetic" ... Pause... Hand the patient some tissue papers
 - d. Encourage expression of feelings: "I am sorry I had to give you such a bad news. I wish things were different. It must be difficult to hear how do you feel about it?" "I understand that it can be difficult to take the news"
 - e. "It is okay. Take your time. I am here for you."
 - f. "Would you like to have some rest in the treatment room before we proceed?"
 - g. Remember to facilitate verbal and non-verbal cues
 - h. Remember to Listen attentively and ask several times about extent of understanding
6. Knowledge check and sharing:
 - a. How much patient already knows? "Just so that we are on the same page, can you tell me what you know about diabetes?"
 - b. "It is not easy to hear that you are diabetic, but we will work together to manage it."

you to improve your health, wellbeing, and prevent diabetes complications".

"As you know diabetes is common worldwide. Many are diagnosed with it and are doing well, and so would you".

"Simply, there are two main types of diabetes, yours is type 2, where your body is not responding to the insulin that is produced by the pancreas".

"Insulin is needed to make use of the glucose, the basic fuel that we get from food, for energy)".

"When glucose is in excess and is not been utilized by the body, it accumulated and harms the eyes, heart, kidneys, nerves and vessels".

"To decrease the glucose to normal, patients need to adjust their diet, start to exercise, take oral tablet, and/or take insulin injections".

Finally expression: "Tell me Mr. X, how do you feel now?"

Acknowledge your limitations in breaking bad news

Reinforce support provision, give clinic phone number

Ask about feelings and emotional acceptance

Summarize: Brief what has been discussed and upcoming plan: "What you

Start eating healthy food. I will refer you to a dietician to help you with that.

Exercise using the right shoes for 30 minutes 5 times a week.

Take your medications regularly

Come back for your appointments: every 3 months with annual check up

"From our side we will help you with:

- Regular labs [HbA1C, lipids, kidney functions and Electro Cardio Gram (ECG)]
- Foot exam, education about foot care, and referral to ophthalmologist for retinal screening annually
- Referral to dentist for screening and follow up every 6 months
- Vaccinations (influenza, Hepatitis B, Pneumococcal virus)

Direct to associations and support groups

Answer any queries and address concerns clearly.

important to discuss signs of hypoglycemia

9. Arrange:
 - a. Give hope but not false one: "I know it's difficult to handle this, we are always available to support you and answer your questions"
 - b. Safety netting: "diabetics are at risk of decreased blood glucose level. You need to be aware of the symptoms to be able to help yourself to half a cup of juice. They include: sweating, shivering, dizziness, palpitation, syncope"
 - c. Give follow up appointment soon and arrange the referrals as mentioned above
 - d. Give away reading material, support groups contact if available
 - e. Ensure patient's safety: "Do you think you can drive back home? If not, would you like me to arrange for you appropriate transportation?"
10. Communication skills: Ensure organized approach, mixed questioning (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Breaking Bad News: Human Immunodeficiency Virus (HIV) Infection

Introduce yourself.

Establish good rapport: "How are you today?"

Close the door, ensure no interruptions (call the nurse and ask her not to allow any interruptions and put your phone on silent) and proper setting (tissue around with some water).

Ask if any family members are with the patient: "Are you here alone?"

Question: Check using open-ended questions: "Mr. X, how can we help you today?" "Do you know why you are here?" "Do you know what tests you had done and why were they done?" "Do you have any idea what the results might be?" "Some people like to have someone (family or friend) with them if they take their results. Are you that type or you are happy to be alone?"

Encourage patient to share in the discussion:

"Since this is the first time I see you, I would like to ask you few questions about your health". Rule out risk factors (multiple sexual partners, tattoos, blood transfusion, previous surgeries).

Enquire about: occupation, marital status, flu like symptoms or lymph node enlargement.

"Before we review the results, tell me, Mr. X, are you the sort of person who like to know details or not?"

"After I reviewed your lab results Mr. X, I am afraid I have some bad news for you".

"Mr. X, I am sorry to tell you that, your results have come back positive for human immunodeficiency virus (HIV)". Pause and Hand the patient some tissue papers.

Encourage expression of feelings: "This must be very hard for you. I can see how difficult it can be to handle this."

"Would you like to have some rest in the treatment room before we proceed?"

Remember to facilitate verbal and non-verbal cues.

I. Listen attentively and ask several times about extent of understanding.

6. Knowledge check and sharing:

- Check how much the patient already knows: "Just so that we are on the same page, can you tell me what you know about Human Immunodeficiency Virus (HIV) infection?"
- "Human Immunodeficiency Virus (HIV) is a viral infection that attacks your immune system"
- "It gets transmitted by body secretions (blood or sexual intercourse)"
- "Having positive antibodies means that you carry the virus and may infect others."
- "The infection has 3 main stages and symptoms usually start with flu-like illness."
- "Fortunately, treatment have been developed to slow the progress of the disease and they are available locally. Although it is not curative, it is important to know that the earlier you start on the medication the later you develop the complications. We will work together with consultants in infectious diseases on that together in order to help you."
- "Moreover, I would encourage you to share the diagnosis with your family and medical attendants. I know many consider it as a social stigma but we can collaborate with social workers and psychologists to sit with your family. This is helpful for them to understand and create a supportive environment for you".
- "Remember to protect yourself from other infections and others from your infection:
 - Avoid sharing injections or shaving tools
 - Do not donate blood
 - Practice safe sex (use condoms). If lubricants are needed use water-based gels such as K-Y gel rather than oil-based ones such as Vaseline as the latter may cause the condom to slip and therefore decreases its efficacy
 - Screen your family for Human Immunodeficiency Virus (HIV) infection so that they can start early treatment if they do"

7. Empathy expression: Explore emotions and show empathy, say, "I can see how difficult it is for you, there are many people out there with similar diagnosis and they have done well. I am sure you can deal with it too."

8. Summarize: "We have discussed multiple things Mr. X so please allow me to wrap up the important messages. As I told you, Human Immunodeficiency

Thus (HIV) is a viral disease that affects your immune system. There is treatment but no cure. You need to take precautions, and to screen yourself. Does that make it more clear? Now, how about outlining a customized plan? "Let us start with":

Lab tests to reflect your immune status (CDcount), the activity of the virus (viral load), and to rule out other sexually transmitted diseases. Referral to the infectious diseases consultant who will review your results and decide the best treatment.

Answer any queries and address concerns clearly: "Would you like to ask me anything? Do you feel better?"

Give hope but not false ones: "I know it's difficult to handle this, we are always available to support you and answer your questions (if you have any please write them on a piece of paper so that we discuss them during the next visit)".

Arrange follow up soon, mention:

- "Let's see each other in few days, at your comfort, to continue the treatment. How about that?"
- Next visit, we will review the results and consider vaccines:
 1. For all patients:
 - Hepatitis B vaccine
 - flu vaccine
 - Pneumococcal vaccine (if CD is more than or equal 200 cells/mm³)
 - Td/Tdap
 2. Some patients:
 - Hepatitis A (if homosexual man)
 - MMR (if CD4 is more than 200 cells/mm³)
 - Varicella (if CD4 is more than or equal 200 cells/mm³)

Red flag: If you develop any fever, rash, lung infection, decreased appetite, or unexpected weight loss please come back immediately

Give away reading material, support groups contact if available. If not explain: "I apologize, I do not have reading material for you, but you can book an appointment any time for any worries or questions you have".

Ensure patient's safety: "Do you think you can drive back home, or

would you like me to arrange for you appropriate transportation?"

10. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Breaking Bad News: Hepatitis B Virus Infection

Protect yourself.

Establish good rapport: "How are you today?"

Setting:

Close the door, ensure no interruptions (call the nurse and ask her not to allow any interruptions and put your phone on silent) and proper setting (tissue around with some water).

Ask if any family members are with the patient: "Are you here alone?"

Question: "Mr. X, how can we help you today?" "Do you know why are you here?" "Do you know what tests you had last time and why were they done?" "Do you have any idea what the results might be?" "Some people like to have someone (family or friend) with them when they receive their results. Are you that type or you are happy to be alone?"

Invite patient to share in the discussion:

"Since this is the first time I see you, I would like to ask you few questions about your health". Rule out risk factors (multiple sexual partners, tattoos, blood transfusion, previous surgeries)

Enquire about: occupation, marital status, symptoms of liver disease (jaundice, abdominal pain, vomiting, fatigue)

"Before we review the results, tell me, Mr. X, are you the sort of person who like to know details or not?"

"After I reviewed your lab results Mr. X, I am afraid I have some bad news for you".

"Mr. X, I am sorry to tell you that, your results have come back positive for Hepatitis B virus (HBV)". Pause and Hand the patient some tissue papers

Encourage expression of feelings: "This must be very hard for you. I can see how difficult it can be to handle this."

"Would you like to have some rest in the treatment room before we proceed?"

Remember to facilitate verbal and non-verbal cues.

Listen attentively and ask several times about extent of understanding

Knowledge check and sharing:

- a. Check how much the patient already knows: "Just so that we are on the same page, can you tell me what you know about Hepatitis B virus (HBV)?"
- b. "Hepatitis B virus (HBV) Infection is common world-wide. A person has a 20-60% lifetime risk of getting it (in Mediterranean areas) and this is often prevented by Hepatitis B virus (HBV) vaccine".
- c. "This virus affects the liver primarily."
- d. "Initially: only few symptoms appear including: flu-like illness, yellowish discoloration of the eyes and skin, fatigue, and/or joint pain."
- e. "Depending on how strong the defense mechanism is, the HBV can either be cleared, extremely weakened leading to "carrier state" or continue causing long-lasting inflammation beyond the first 6 months, a condition called "chronic infection"".
- f. Explain what HBV carriers are at risk of:
 - * They are at increased risk for getting other viruses such as Hepatitis D or A.
 - * The virus is easily transmitted when exposed to the body secretions of an infected person (blood, saliva, tears, or genital secretions). So this essentially happens from sharing razors, blades, toothbrushes, or from having intimate relationship with an infected individual. However holding hands, hugging, sneezing, coughing, breast feeding or drinking from the same glasses does not transmit it.
 - * This means you can resume your normal daily life activities with no restrictions. However, you have to have few adjustments to protect yourself from other infections and to protect your loved ones:
 - * Ensure daily balanced diet with lots of water, and limit your alcohol to less than or equal to once daily.
 - * If you are living with family, preferably bring them to be tested and vaccinated against Hepatitis B.
 - * I encourage you to discuss the issue with your spouse. You can also bring him or her to the clinic, so that we help you with that and prepare him or her psychologically. This is very important and will ensure that you have a supportive environment.
 - * If you do practice intimate relationship, we can make an appointment to discuss safe intercourse (using condoms).

- Check understanding" What do you think about that?"
- Explain risk of hepatocellular carcinoma: It is essential that you know that, at later stages of the infection, especially if not properly managed, a chronic infection for more than 5 years can lead to that liver cell damage. This can cause cirrhosis or liver failure in 20% of patients and cancer (Hepatocellular carcinoma) in 15% of them". However, we will provide all needed care to prevent that.
- Explain role of antiviral agents: The good news is that we have treatment that slows down the damage. There are medications to help decrease the infectious state and progression of the disease and gladly they are locally available. We will work together with our experienced liver doctor (hepatologist) to ensure the best for your health.

Empathy expression: Reinforce support provision, give clinic phone number, ask about feelings and emotional acceptance

Summarize: "Mr. X how are you feeling? I do not want you to leave confused. So let us make a clear plan."

Brief what has been discussed and upcoming plan "let us start with":

- Lab tests to reflect your liver function, and to rule out other sexually transmitted diseases
- Ultrasound to the check how well have your liver has been coping with Hepatitis B virus (HBV)
- Referral to liver doctor (hepatologist) for investigation and management. This will help us in deciding the best treatment.
- Hepatitis A vaccine to prevent co-infection

Answer any queries and address concerns clearly: "Would you like to ask me anything? Do you feel better?"

Range:

- Give hope but not false ones: "I know it's difficult to handle this, we are always available to support you and answer your questions".
- Safety netting: "If you develop any yellowish discolouration, itchiness, bleeding, or suffer from difficulty with sleep please come back immediately"
- Follow up soon: "Let's see each other in few days, at your comfort, to continue the treatment. Will that be ok for you?"
- Give away reading material, support groups contact if available.

c. Ensure patient's safety: "Do you think you can drive back home or would you like me to arrange for you appropriate transportation?"

10. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

for any

Counseling a Patient with Hepatitis C Virus (HCV)

Introduce yourself and establish good rapport

ideas, Concerns and Expectation (ICE)

Since when? How? Any treatment? Understanding of the disease? Just so that we are on the same page, can you tell me what you know about HCV?"

Any complaint: weight loss, jaundice, loss of appetite, fever, fatigue, dark urine, clay colored stool, abdominal pain, nausea, vomiting.

Past medical and social history (smoking, sexual activity, illicit drug use)

"As your doctor, I think it's very important for you to understand that HCV infects the liver primarily".

"It is usually transmitted through sharing contaminated needles, shavers, toothbrush, or having multiple sexual partners (small risk if solitary-heterosexual partner). It can less likely be transmitted through surgeries/ blood transfusions since blood from donors is tested nowadays and devices are adequately disinfected. HCV is not spread by sneezing coughing, hugging, eating utensils or through food and water".

"Initially, only few symptoms appear including: flu-like illness, yellowish discoloration of the eyes and skin, fatigue or joint pain". Depending on how strong the body's defense mechanism is, the HCV can either be cleared, or continue causing long-lasting inflammation beyond the first 6 months, a condition called 'chronic infection'. Unfortunately, HCV is the most common viral cause of chronic hepatitis where 70-80% of infected individuals develop chronic infection".

"It is essential that you know that, at latter stages of the infection, especially if not properly managed, a chronic infection for 20-30 years can lead to liver cells damage. This can cause liver cirrhosis in 15-30% of patients or even progress to hepatocellular cancer (HCC)".

"The good news is that we have treatment that slows down the damage and there are medications to help decrease the infectiousity and progression of the disease and they are locally available. We will work together with our experienced liver doctor

(hepatologist) to ensure the best for your health".

4. Assess: Patient understanding, clarify any IGE
5. Assist: "Lets share a plan which is suitable for helping you. You can resume your normal daily life activities with no restrictions. However, you have to make few adjustments to:
 - a. Protect yourself from other infections:
 - Ensure daily balanced diet with lots of water, and limit your alcohol to less than or equal once daily.
 - Avoid strenuous exercises, increased work load, or stress.
 - ~~Do not take medications without doctors advise (some may damage the liver)~~
 - Practice safe sex: use male condoms
 - Get Hepatitis A and B vaccines to prevent co-infection
 - b. Regular follow up with:
 - Lab tests to reflect your liver function, and to rule out other sexually transmitted diseases.
 - Ultrasound to check how well your liver has been cured.
 - If liver damage occurs, we can start you on drugs: interferon/antivirals (as lamivudine). These can cure up to 80% of people with hepatitis C.
 - c. Protect your loved ones:
 - Maintain good hygiene: do not share tooth brush/shavers/needles. Wipe up blood spills with household bleach. Cover cuts and wounds with firm dressings
 - Do not donate blood
 - I encourage you to discuss the issue with your spouse. You can also bring him or her to the clinic, so that we help with that and prepare him or her psychologically. This is very important and will ensure that you have support environment and that your spouse is tested.
6. Arrange:
 - a. Positive reinforcement : "Many others did it before you, you can definitely do it, we are always available to support you"
 - b. Follow up soon
 - c. Refer to:
 - Dependence unit to treat alcohol dependence and Intravenous (IV) drug abuse if any.

Liver doctor (hepatologist) for liver biopsy. This will help us in deciding the best treatment.

Safety netting: "If you develop any yellowish discolouration, itchiness, bleeding, or suffer from difficulty with sleep please come back immediately".

Brief assessment of underlying conditions and age appropriate screening

Give away reading material if available

Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and attention on patient's ideas, concerns and expectations.

Breaking Bad News: Abnormal Mammogram Result

1. Introduce yourself
2. Establish good rapport: "How are you today?"
3. Setting: Close the door; ensure no interruptions (call the nurse and ask her not to allow any interruptions and put your phone on silent) and proper setting (tissue around with some water). Ask if any family members are with the patient (Are you here alone?)
4. Perception: "Ms. X, how can we help you today?" "Do you know why are you here?" "Do you know what tests you had last time and why were they done?" "Do you have any idea what the results might be?" "Some people like to have someone (family or friend) with them if they take their results. Are you that type or you are happy to be alone?"
5. Invite patient to share in the discussion:
 - a. "Before we review the results, tell me, Ms. X, are you the sort of person who like to know the details or in brief?"
 - b. "Ms. X, I am afraid I have a bad news, your results from the mammogram showed an abnormal area." Pause... Hand the patient some tissue papers
 - c. Encourage feelings expression: "I am sorry I had to give you such bad news. I have double checked with the radiologist (imaging doctor) to make sure that they read it right for the right patient. I wish things were different. It must be difficult to hear, how do you feel about it?" (Rotte & Lopez, 2012)
 - d. Clarify: We are not yet sure what can this abnormal looking area be and for that reason you need to have a biopsy (which is taking a sample by needle) from your breast to see this area under the microscope and see if they have cancer".
 - e. "Would you like to have some rest in the treatment room before we proceed?"
 - f. Remember to facilitate verbal and non-verbal cues
 - g. Remember to Listen attentively & ask several times about understanding
6. Knowledge check and sharing:
 - a. How much patient already knows: "Just so that we are on the same

page, can you tell me what you know about abnormal mammogram and what it could be?"

If patient asks about breast cancer, explain:

- "Breast cancer occurs when normal cells in the breast change & grow out of control".
- "It is common in females, but may also occur in males". "It runs in families".
- "Breast cancer treatment depends on the stage at which it is diagnosed, and the patient preferences. When surgery is considered, women with breast cancer can choose between mastectomy (removal of the whole breast) or breast conservative therapy/lumpectomy (removal of the cancer and a section of the healthy tissue around it)".
- "Other therapies that can be considered are ones that help the body to kill any leftover cancer cells. These include chemotherapy, radiotherapy or hormonal therapy".
- "After treatment, most patients do well. You will only need to be checked with a mammogram annually to see if the cancer comes back".

Reinforce expression: Reinforce support provision, give clinic phone number
about feelings and emotional acceptance

Summarize:

Brief what has been discussed, upcoming plan: "I have arranged for a biopsy to be done with our radiologist and we will take it from there. The biopsy is usually taken under local anesthesia and ultrasound guidance. During the procedure, we take one or more small samples of the abnormally looking tissue from the breast. That way we can look at the cells under the microscope to see if they have cancer"

Answer any queries & address concerns clearly

Arrange:

Give hope but not false ones: "I know it's difficult to handle this, we are always available to support you and answer your questions".

Safety netting : "If you develop any fever, pain, bleeding from the nipples please come back immediately"

Follow up soon

Give away reading material, support groups contact if available

- e. Ensure patients' safety: "Do you think you can drive back home or would you like me to arrange for you appropriate transportation?"
- 10. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Breaking Bad News: Abnormal Pap Smear Result

Introduce yourself.

Establish good rapport: "How are you today?"

Setting:

Close the door, ensure no interruptions (call the nurse and ask her not to allow any interruptions and put your phone on silent) and proper setting (tissue around with some water)

Ask if any family members are with the patient: "Are you here alone?"

Reception: "Mr. X, how can we help you today?" "Do you know why are you here?" "Do you know what tests you had last time and why were they done?" "Do you have any idea what the results might be?" "Some people like to have one (family or friend) with them when they receive their results. Are you this type or you are happy to be alone?"

Involve patient to share in the discussion:

"Before we review the results, tell me, Ms. X, are you the sort of person who like to know the details or not?"

"Ms. X, I am afraid I have bad news".

"Ms. X, your results from the Pap smear turned to be abnormal". Pause and hand the patient some tissue papers.

Encourage feelings expression: "I am sorry I had to give you such bad news. I have double checked with the pathologist (tissue doctor) to make sure that they read it right for the right patient. I wish things were different. It must be difficult to hear, how do you feel about it?" (Rotte & Lopez, 2012)

"The good news is that having an abnormal Pap smear does not mean that you have cancer. It sometimes happens due to some infection or menopause".

"Would you like to have some rest in the treatment room before we proceed"

Remember to facilitate verbal and non-verbal cues

Remember to Listen attentively and ask several times about extent of understanding

Acknowledge check and sharing:

a. Check how much patient already knows: "Just so that we are on the

same page. can you tell me what you know about cervical cancer?

- b. "Cervix is the bottom part or the neck of the uterus or womb. Cancer happens when the normal cells of the cervix change and grow out of control".
- c. "Cervical cancer might not cause any symptoms at first. When it does cause symptoms, it can cause vaginal bleeding that occurs between periods, after intercourse, or after menopause".
- d. "When the Pap smear turns abnormal, we should follow it up with a test called a biopsy. During a biopsy, the doctor will remove a piece of the abnormal-looking tissue from the cervix. The doctor would do that using a magnifying lens called "colposcopy" in order to see the cervix better during the procedure".
- e. "The biopsy sometimes finds cells in the cervix that are not cancerous, but are abnormal and have high chance of turning into cancer. If you turn out to have these "pre-cancerous" cells, the treatment is to remove them to prevent them from turning into cancer, otherwise we might choose to watch them closely over time".
- f. "On the other hand, if the biopsy shows cervical cancer, then it should be treated with surgery to remove the cancer. Different types of surgery can involve: removing the cervix, uterus, and upper part of the vagina in a procedure called "radical hysterectomy", removing all or part of the cervix but leaving the uterus in place. The latter option is only done in special situations".
- g. "Other therapies that can be considered are ones that help the body kill any leftover cancer cells. These include chemotherapy and radiotherapy".

7. Empathy Expression: Reinforce support provision, give clinic phone number and ask about feelings and emotional acceptance

8. Summarize:

- a. Brief what has been discussed, upcoming plan: "I have arranged for a biopsy to be done with our gynecologist and we will take it from there".
- b. Answer any queries and address concerns clearly

9. Arrange:

- a. Give hope but not false one: "I know its difficult to handle this, you are always available to support you and answer your questions". "Most women whose pap smear turn to be abnormal and treated".

early do very well. After treatment, you will be checked every 3 to 6 months (depending on the abnormality) to see if those abnormal changes reoccur. Follow up tests can include clinic exams, pap tests, and/or some imaging".

Safety netting: "If you develop any bleeding from your genital tract, pain, fever, or abnormalities with sleep please come back immediately". Follow up soon

Give away reading material, support groups contact if available.

Ensure patient's safety: "Do you think you can drive back home; or would you like me to arrange for you appropriate transportation?"

Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Breaking Bad News: Rubella Exposure in Early Pregnancy

1. Introduce yourself.
2. Establish good rapport: "How are you today?"
3. Setting:
 - a. Close the door, ensure no interruptions (call the nurse and ask her not to allow any interruptions and put your phone on silent) and proper setting (tissue around with some water)
 - b. Ask if any family members are with the patient: "Are you here alone?"
4. Perception: "Mrs. X, how can we help you today?" "Do you know why you are here?" "Do you know what tests you had last time and why were they done?" "Do you have any idea what the results might be?" "Some people like to have someone (family or friend) with them if they take their results. Are you that type or you are happy to be alone?"
5. Invite Patient to share in the discussion:
 - a. "Since this is the first time that I see you, I would like to ask you few questions about your current pregnancy and your general health."
 - History (gestational age, prenatal follow up, Measles, Mumps and Rubella (MMR) vaccination status)
 - Any symptoms[fever, malaise, cough, sore throat, rash, headache, lymphadenopathy, arthralgia)
 - Status of the contact: diagnosis of Rubella confirmed or not and when.
 - b. "Before we review the results, tell me, Mrs. X, are you the sort of person who like to know the details or in brief?"
 - c. "After I reviewed your lab results Mrs. X, I am afraid I have some bad news for you". Pause and Hand the patient some tissue papers
 - d. "Mrs. X, I am sorry to tell you that, your results have come back positive for rubella and there is 85% chance that the fetus gets affected if you are in early pregnancy"
 - e. Encourage feelings expression: "This must be very hard for you. I can see how difficult it can be to handle this. Would you like to express yourself?"
 - f. "Would you like to have some rest in the treatment room before we proceed?"
 - g. Remember to facilitate verbal and non-verbal cues.

h. Listen attentively and ask several times about extent of understanding

knowledge check and sharing:

- a. Check patient's knowledge about rubella infection.
- b. Tell the patient: "Rubella is a viral infection that causes fever, flu-like symptoms, or itchy rash (red dots that appear 3-5 days after the onset of symptoms, progressing from the face backward. All clear within 1-2 weeks), and is usually prevented by rubella vaccine".
Contagious period: few days before onset of rash to 7 days after it
- c. When a non-immune pregnant lady gets in contact with someone with rubella, she is 20% susceptible to acquire the infection in 2-3 weeks (incubation period). "You will be referred to an obstetrician to discuss the required testing or ultrasound to detect any fetal abnormalities (congenital heart defect, cataract, microcephaly, sensorineural deafness, etc), a condition called "congenital rubella syndrome".
"Unfortunately, there is no effective treatment to prevent the development of congenital rubella syndrome once the mother is infected. However, the risk of fetal manifestations if mother infected is: 85% before 9 weeks, 52% from 9-12 weeks, and rarely after 16 weeks of pregnancy".
Other complications include: spontaneous miscarriage, or stillbirth.

Empathy expression: Reinforce support provision, give clinic phone number, ask about feelings and emotional acceptance.

Summarize: "Mrs. X how are you feeling? I do not want you to leave with your thoughts mixed up all over. So let us make the plan clear. How about that?"

Investigations: Repeat IgG test in 2-3 weeks (incubation period) to look for significant increase in the titer, indicating recent infection.
Management plan/options:

- If IgM negative and no increase in IgG : no acute infection and reassurance
- If IgM positive and significant increase in IgG : acute infection with high risk of congenital Rubella Syndrome, and counsel as follows:
 - Abortion (illegal in UAE)
 - Shot of immunoglobulin as soon as possible (in the hope of reducing the fetal risk of defects)

- However, the shot will not prevent the fetal infection)
- Referral to Fetal Medicine Unit (FMU) (diagnostic cardiovascular system, antenatal and fetal anomalies scan)
- Postpartum MMR vaccine (4-12 weeks before a subsequent pregnancy)
 - * To restrict contact with any person with rash
- c. Answer any queries and address concerns clearly: "Would you like to ask me anything? Do you feel better?"

9. Arrange:

- a. Give hope but not false ones: "I know it's difficult to handle this and there are always available to support you and answer your questions"
- b. Safety netting: "If you noticed any fever, vaginal bleed or new symptoms please come back"
- c. Give follow up appointment soon and arrange the referrals as mentioned above
- d. Give away reading material, support groups contact if available
- e. Ensure patient's safety: "Do you think you can drive back home? If not, would you like me to arrange for you appropriate transportation?"

10. Communication skills: ensure organized approach, mixed questioning (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

If pregnant gave hr of Contact IgM + re-acq
 check IgG, if < IgG + he → immune
 * Incubation period: few days before up to one week after rash.
 before 1 month of first trimester pregnancy → high chance for C

Breaking Bad News: Varicella Zoster (VZ) Exposure in Early Pregnancy

Introduce yourself: "Good Afternoon Mrs. X".

Establish good rapport: "How are you today?"

Close the door, ensure no interruptions (call the nurse and ask her not to allow any interruptions and put your phone on silent) and proper setting (tissue around with some water)

Ask if any family members are with the patient: "Are you here alone?"

Intervention: "Mrs. X, how can we help you today?" "Do you know why you are here?" "Do you know what tests you had last time and why were they done?" "Do you have any idea what the results might be?" "Some people like to have someone (family or friend) with them if they take their results. Are you that type or you are happy to be alone?"

Patient to share in the discussion:

Since this is the first time that I see you, I would like to ask you few questions about your current pregnancy and your general health".

- History (gestational age, prenatal follow up, Measles, Mumps and Rubella (MMR) vaccination status)
- Any symptoms (fever, malaise, cough, sore throat, rash, headache, lymphadenopathy, arthralgia)
- Status of the contact: diagnosis of chickenpox confirmed? When?

"Before we review the results, tell me, Mrs. X, are you the sort of person who like to know the details or in brief?"

"After I reviewed your lab results Mrs. X, I am afraid I have some bad news for you". Pause and Hand the patient some tissue papers "Mrs. X, I am sorry to tell you that, your results have come back positive for varicella infection and the chance your baby will get affected is 2% if you are in early pregnancy and the fetus may get sever damages if you acquired it soon before delivery as the risk is 20%." Encourage feelings expression: "This must be very hard for you. I can see how difficult it can be to handle this. Would you like to

express yourself?"

- f. "Would you like to have some rest in the treatment room before we proceed?"
- g. Remember to facilitate verbal and non-verbal cues.
- h. Listen attentively and ask several times about extent of understanding.

6. Knowledge check and sharing :

- a. Check patient's knowledge about varicella infection.
- b. Chickenpox is a highly contagious infection that is caused by a virus called Varicella Zoster. It causes fever, flu-like symptoms, vomiting, diarrhea, headache and itchy rash (red dots and pimples that appear on face then trunk then extremities, may or may not involve oral mucosa, ear, anal area), and is usually prevented by varicella vaccine.
- c. Contagious period: 1-2 days before rash appearance and until all blisters scab.
- d. When a non-immune pregnant lady gets in contact with someone with chickenpox, she is rarely acquiring the infection in 10-21 days (incubation period).
- e. If mother acquires the infection the fetal risk is:
 - First trimester: 0.4-2%: congenital varicella syndrome (Intrauterine Growth Restriction (IUGR), limb hypoplasia, ocular abnormalities, central Nervous System (CNS) abnormalities, cardiac defects, hepatosplenomegaly and limb scarring)
 - 5 days before or 2 days post-delivery: 20-40%: neonatal varicella (chickenpox and encephalitis): 30% risk of neonatal mortality
 - Other complications: miscarriage, still birth, Maternal pneumonia in 10% (more if smoker)

7. Empathy expression: Reinforce support provision, give clinic phone number, ask about feelings and emotional acceptance

8. Summarize: "Mrs. X how are you feeling? I do not want you to leave with your thoughts missed up all over. So let us make the plan clear. How about that?"

- a. Investigations: pregnancy already confirmed with serology for Varicella (IgM and IgG)
- b. Can we know if the fetus infected? Diagnosis of VZ infection in the

Infant is difficult because only 27% have an IgM response. Serology for IgG can be performed after the sixth month:

Management plan/options:

- If IgM negative and no increase in IgG: no acute infection and reassurance
- If IgM positive and significant increase in IgG: acute infection, counsel as follows:
 - First trimester: Abortion, referral to Fetal Medicine Unit (FMU) (diagnostic: cardiovascular system, antenatal and fetal anomalies scan)
 - Peripartum: delay delivery by 10 days if possible to give time for maternal IgG to be carried to the fetus by the placenta, so infection will be less harmful. After delivery give Varicella Zoster immunoglobulin (VZIG) to the neonate.
 - Take VZ vaccine (first dose before leaving postpartum and second dose 6-8 weeks later)
- A dose of immunoglobulin as soon as possible (in the hope of reducing the fetal risk of defects. However, the shot will not prevent the fetal infection)
- Referral to Fetal Medicine Unit (FMU) (diagnostic: cardiovascular system, antenatal and fetal anomalies scan)
- Postpartum MMR vaccine (4-12 weeks before any subsequent pregnancy)
- To restrict contact with any person with rash

d. Answer any queries and address concerns clearly: "Would you like to ask me anything? Do you feel better?"

orange:

- a. Give hope but not false ones: "I know it's difficult to handle this, we are always available to support you and answer your questions".
- b. Safety netting: "If you noticed any fever, vaginal bleed or new symptoms please come back"
- c. Give follow up appointment soon and arrange the referrals as mentioned above
- d. Give away reading material, support groups contact if available
- e. Ensure patient's safety: "Do you think you can drive back home, or would you like me to arrange for you appropriate transportation?"

Communication skills: ensure organized approach, mixed questioning style

open and close-ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Dealing with Angry Patient

Introduce yourself, establish good rapport, and maintain friendly gestures

What to do?

- a. Acknowledge the person's anger and validate his or her feelings. Say "I can see that you are upset about....."
- b. Find out the reason for the patient's anger and let him or her vent the anger, or any feelings that led to his or her anger, e.g. frustration, fear, guilt.
 - "I am very sorry that you had to wait so long to be seen. We have not forgotten about you, but we are very busy today. We always make sure that each patient's problems are fully evaluated, and some problems take longer than others" (Rotte & Lopez, 2012)
 - "I am sorry you have had to repeat your medical history so many times. This is a teaching hospital, and that means that we have medical students and residents here, but we all work together. Sometimes, being seen by more than one person can help tease out some important details. Moreover, senior physicians always supervise all of your care" (Rotte & Lopez, 2012)
 - "We treat all patients the same here regardless of their insurance status or ability to pay. Is there any specific reason you do not wish to be discharged? Are you worried about a problem at home or work?" (Rotte & Lopez, 2012)

Offer to do something for him or her: "You are right to expect to be treated quickly when you come to our hospital. Here is what I can do to get your x-rays done as soon as possible". "I am here to help you now and I will spend as much time with you as you need" (Rotte & Lopez, 2012).

How to do it:

Be aware of your own safety and know your escape route

Setting: sit at the same level of the patient while respecting his or her personal space. Maintain a distance of two arm's length and provide space for easy exit.

Mind non-verbal cues:

- Speak calmly and do not raise your voice. Use concise and simple language

- Avoid dismissive or threatening body language.

d. Be responsive:

- Empathize as much as you can.
- Encourage the person to speak. Ask open rather than closed questions, use verbal and non-verbal cues to show that you are listening.
- Identify feelings and desires: "What are you hoping for?"
- Listen closely to what the patient is saying, and restate what the patient said to improve mutual understanding (example: "Tell me if I have this right...").

e. Address violence directly: The patient should be asked relevant questions, such as: "Do you feel like hurting yourself or someone else?"

4. What NOT to do:

- a. Non-verbal cues:
 - Glare at the person.
 - Approach the patient from behind or move suddenly
 - Get too close to or touch him or her
 - Block his exit route
- b. Verbal cues:
 - Confront, interrupt, argue, or command the patient to calm down
 - Patronize him or her
 - Put the blame on others or exonerate yourself: "I was not there when you had this test ordered, so I cannot say exactly what was the doctor's plan, and I cannot speak for that doctor" (Rotte & Lopez, 2012).
 - Lie to the patient or make unreasonable promises
- c. Breach confidentiality (especially if the angry person is a relative)

5. Arrange: "Before we finish, let us quickly review what we have decided to do:

- a. Be realistic and do not break the rules or do harm
 - "I am not able to give you more than 3 days off work. If you are still having serious symptoms after 3 days, you should come back to my office to be re-examined" (Rotte & Lopez, 2012).
 - "I know you only want what is best for your child. We do too. But ordering extra tests or medications will not help him or her out at this point. I am willing and able to get your child any tests or medications he or she needs, but

right now, I think it would be best to start with some basic tests. If anything abnormal shows up, we can order additional tests, as needed" (Rotte & Lopez, 2012).

b. Follow up as needed

If medications prescribed explain: "You are a vital part of your own care, and it is important that you take this medicine every day, as directed". "My job is to give you my opinion on the best way to deal with your medical problem. You are in charge of your own health, so it is entirely up to you whether you want to take the advice" (Rotte & Lopez, 2012).

c. Brief assessment of underlying conditions, age appropriate screening

d. Give away reading material if available

Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Medical Error Disclosure

1. Introduce yourself and establish good rapport
2. Ask:
 - a. Reason behind the visit
 - b. Specific ideas or concerns for this visit (medication, vaccination, care related to underlying condition)
 - c. Why the test was done or medication was prescribed?
3. Medical Error Disclosure
 - a. Give warning statement "I am sorry but I have bad news for you today!"
 - b. State the error clearly in simple language (wrong dose or diagnosis was given or provided)
 - c. Mention why the error occurred. Avoid making excuses or blaming others (a colleague, system, program, clerk...etc.)
 - d. Pause and wait for the patient's reaction. Encourage feelings and emotions expression. Show empathy, and avoid medical jargon. "Understand your frustration"
4. Express Accountability
 - a. Apologize personally: "I am very sorry that this happened. I am sure it was a terrible experience" (Rotte & Lopez, 2012).
 - b. Express responsibility: "I apologize for what happened. I feel awful that I made that mistake" (Rotte & Lopez, 2012).
 - c. Remain calm and don't argue: "I take responsibility for this error. You have been my patient for several years now, and I appreciate you letting me take care of you. I am glad to see that you are doing well, and I want you to know that I am going to work hard to make sure that you get better" (Rotte & Lopez, 2012).
5. Assist:
 - a. Put a plan to remedy harm taken place
 - b. Reassure that this will not happen again and state possible actions to avoid similar events "I want to make sure that such an error does not happen to you again. I will therefore highlight this allergy on your medical record, write an incident report, and keep you updated during your close follow up" (Rotte & Lopez, 2012).

Invite questions from patient "What questions do you have for me?"

range:

- 1. Follow up if no improvement at any time.
- 2. Brief assessment of underlying conditions, age appropriate screening, vaccination
- 3. Give away reading material if available

Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Health Maintenance for Elderly

(More than or equal to 65 years old)

1. Introduce yourself
2. Establish good rapport
3. Ask: Take a brief history:
 - a. Age, work, marital status.
 - b. Past medical history: any vision, hearing, or balance impairment; o risk factors for each, sedentary life style, chronic diseases, medications, allergies
 - c. Surgical history
 - d. Family, and social histories (caregiver support, changes in living arrangement, smoking, alcohol)
 - e. Risk of elderly abuse, assess caregiver's depression or burnout
 - f. Sexual history
 - g. Ideas, concerns, and expectations (ICE) (patient often worried about something he or she heard about, or have a friend or family member suffering from).
4. Advise: (Primary prevention)
 - a. Avoidance of smoking and alcohol ✓
 - b. Promoting physical activity ✓
 - c. Immunization: Influenza, Pneumococcal, and Diphtheria, Tetanus, and acellular Pertussis (DTaP) _____
5. Assess: (Secondary and Tertiary prevention). Check for:
 - a. Cognitive impairment: Mini-mental status examination, Clock Test
 - b. Depression: Geriatric depression scale
 - c. Hearing (audiometry) or vision impairment (Snellen chart)
 - d. Oral health: tooth brushing routine, dental visit
 - e. Malnutrition: Nutritional health checklist
 - f. Hypertension, Diabetes mellitus, and hyperlipidemia: screening BP measurement and lipid profile
 - g. Abdominal aortic aneurysm (AAA): screen males more than 65 years who have ever smoked by abdominal ultrasound _____
 - h. Urinary incontinence: review fluid intake, and medications and take focused history
 - i. Cancers: screen for:

- Cervical cancer: 21 to 65 years old by cytology every 3 years, or by combined cytology and human papilloma virus (HPV) testing every 5 years (the latter only for more than or equal to 30 years old).
- Breast cancer: 40 to 74 years old by mammography every 2 years
- Colorectal cancer: 40 to 75 years old. In UAE, otherwise 50 to 75 by high-sensitivity fecal occult blood test (FOBT) or fecal immunological test (FIT) test annually, combined sigmoidoscopy every 5 years along with high-sensitivity fecal occult blood test (FOBT) or fecal immunological test (FIT) every 3 years, or colonoscopy every 10 years
- Lung cancer: 55 to 80 years old who is smoking more than or equal to 30 pack per year or have quit it less than or equal to 15 years by annual low-dose computed tomography

Osteoporosis: screen females more than 65 and males more than 75 years old by Dual-energy X-ray absorptiometry (DEXA) scan. Say: "We perform a special type of x-ray, called DEXA scan, to check for osteoporosis, a condition of bone thinning, due to loss of calcium, making them brittle or easily fracture".

- Disorders of gait and balance: Balance and Gait Evaluation by "Get up and go" test
- Functional ability: (eating, dressing, bathing), instrumental activities of daily living (cooking, driving, housework, using phone), ability to drive (movement dysfunction, vision impairment, impaired neck rotation)

Assist:

say: "Falls are the most common accidents in older people and most serious in people more than 65 years because our reflexes deteriorate with age. Falls at this age are serious because 5% of them result in a fracture. To avoid them you should:"

- "Remove rugs, or fix them well using a double-faced tape or nonslip backing"
- "Turn on lights in hallways and stairways. Use light bulbs, as they are better than fluorescent lights"
- "Remove clutter, including cords or wires, from walkways"
- "Be sure that handrails are attached well on both sides of all stairways"
- "Install handrails in the bathtub and near the toilet"
- "Use a nonslip rubber mat in the bathtub"

- 8.
 - a. "Move items you can't reach to lower shelves and cabinets"
 - b. "Get up slowly when you are sitting or lying down"
 - c. "Always wear your corrective eyeglasses. Be careful when wearing multifocal glasses, and do not wear them while climbing stairs or walking"
 - d. "Wear shoes with a low heel, adequate closures and nonslip soles. Avoid slippers, backless shoes, or going barefoot"
 - e. "Improve your bone status by taking vitamin D and Calcium supplements"
- 7. Arrange:
 - a. Positive reinforcement: "Many others did it before you, you can definitely do it, we are always available to support you"
 - b. Follow up soon
 - c. Anticipate complications, safety netting, red flags
 - d. Brief assessment of underlying conditions, and review of the medications.
 - e. Refer for dental check up
 - f. Give away reading material if available
- 8. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Health Maintenance for Adults (Less than 65 years old)

Introduce yourself and establish good rapport

- Take a brief history: age, work, marital status, past medical, surgical, family, and social histories, occupation, family support, changes in living arrangement, life stressors, smoking, alcohol, sexual history, life style (sedentary or active), medication
- Clearly define and address the patient's ideas, concerns, and expectations (ICE). Example: If patient was worried about family history of diabetes ask about symptoms (polyuria, polydipsia)
- Tailor physical examination as needed and adjust health maintenance according to the patient's age and risk factors (family planning, stroke, cardiovascular disease...)

Use: (Primary prevention)

Avoid smoking and alcohol consumption

Healthy diet: "At times we get confused about what we should or should not eat. Briefly we have to follow some general rules:"

- Fish: "eat 2 to 7 times per week"
- Red meat or chicken: "limit to small portions, preferably not daily"
- Caffeinated beverages (tea, coffee, chocolate): "limit to 2 to 4 portions per day"
- Takeaway food: "limit takeaway food to once per week (high in salt and fat)"
- Fruits and vegetables: "5 to 7 portions per day"
- Water: "drink water 8 to 10 glasses per day"
- Diary products: "use low fat product, and limit cheese and ice-cream to twice per week"

Regular exercise: (example: 30 minutes of brisk walking each day)

Immunization: Influenza, Pneumococcal, Human papilloma virus (HPV), Hepatitis B, Zoster, tetanus and diphtheria (Td), or tetanus, diphtheria, and acellular pertussis (Tdap).

Risky sexual behaviors or recreational drugs use: sexually transmitted disease (chlamydia, Human immunodeficiency virus (HIV), Hepatitis B virus)

4. Assess: (Secondary and Tertiary prevention). Check for:

- a. Depression: 2 screening questions, if positive use PHQ9 questionnaire
- b. Dental screening (every six months)
- c. Hypertension, diabetes mellitus, and lipid screening. Consider aspirin
- d. Cancer: screen for:
 - Cervical cancer: 21 to 65 years old by cytology every 3 years, or by combined cytology and human papilloma virus (HPV) testing every 5 years (the latter only for more than or equal to 30 years old)
 - Breast cancer: 40 to 74 years old by mammography every 2 years
 - Colorectal cancer: 40 to 75 years old in UAE, otherwise 50 to 75 years old by high sensitivity fecal occult blood test (FOBT) or fecal immunological test (FIT) test annually, combined sigmoidoscopy every 5 years along with high-sensitivity fecal occult blood test (FOBT) or fecal immunological test (FIT) every 3 years, or colonoscopy every 10 years
 - Lung cancer: 55 to 80 years old who is smoking more than or equal to 30 pack per year or quit it less than or equal to 15 years by annual low-dose computed tomography
- e. Intimate partner violence "I hope you do not mind that I have few personal questions that I ask all my patients. Do you feel safe at home or in your current relationship? Did someone hurt you? Did someone do something to you that you did not want? Are you afraid of your partner or anyone else?" (Rotte & Lopez, 2012)

5. Assist:

- a. Injury prevention: advice regarding: helmets use, car seat belts, following traffic rules, avoiding driving while under alcohol effect.
- b. Support if marital conflicts "The three keys to marital success are caring, respect and responsibility. If we take proper care and responsibility, we can keep problems to a minimum. Know yourself. Share your interests and goals. Continue courtship after marriage. Make love and avoid war. Cherish your mate. Prepare yourself to be a parent. Seek proper help when necessary. Do unto your mate as you would have your mate do unto you". (Murtagh, 2012)
- c. Support if exposed to intimate partner violence "Thank you for

sharing with me today; I know this must be difficult to talk about. Would you like to know about some resources for getting help? [Rotte & Lopez, 2012].

d. Education on safe sex, barrier contraception methods use.

Arrange:

- Positive reinforcement: "Many others did it before you, you can definitely do it, we are always available to support you"
- Follow up soon
- Anticipate complications, safety netting, red flags
- Give away reading material if available

Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Health Maintenance for Adolescents

(10-19 years old according to W.H.O.)

1. Introduce yourself
2. Establish good rapport
3. Ensure Privacy (consider meeting privately with the adolescent for sensitive topics)
4. Ask:
 - a. (ICE) Ideas, Concerns and Expectation (e.g. obesity, depression, partner with Sexually Transmitted Disease (STD), unwanted pregnancy)
 - b. Medical, surgical, family, social history (explore relations and communication with parents)
 - c. Check (HEEDSS)
 - Home and external environment
 - Education & employment
 - Activities and hobbies
 - Drugs, substance, alcohol abuse and or smoking
 - Sexual activities
 - Suicidal thoughts or plans
5. Advise:

"As your doctor, I think it's very important for you to share with me some medical and personal information that will help me understand what kind of health advice you might need. I'm here to educate you and give you information. I'm hoping you'll make good decisions. If you ever make a mistake, I hope you will trust me enough to help take care of you. By law, I have to keep anything you tell me confidential unless I'm concerned about your safety or someone else's safety, then, the law sometimes requires me to notify others".
6. Assess: start with physical health then inquire about multiple sexual partners, drug abuse, alcohol abuse (to gain trust)
 - a. Review the file for:
 - BP check: from 18 years (at every visit)
 - Weight, height and BMI screen yearly If abnormal offer behavioral based intervention to achieve better overall health, and decrease of peer pressure), advise regarding

- Healthy diet: "At times we get confused about what we should or should not eat. Briefly we have to follow some general rules:
 - Fish: eat 2-7 times per week.
 - Red meat, chicken: limit to small portions, preferably not daily
 - Caffeinated beverages (tea; coffee; chocolate): limit to 2-4 portions per day
 - Takeaway food: limit to once per week (high in salt and fat)
 - Fruits and vegetables: 5-7 portions per day
 - Water: 8-10 glasses per day
 - Dairy products: use low fat products; limit cheese and ice cream to twice per week".
 - Regular exercise: (e.g. 30 minutes of brisk walking each day).

- Depression screen: 12-18 years (using 9-item Patient Health Questionnaire for Adolescents) OR use the two screening questions (mood and interest in the last 2 weeks). If positive offer SSRIs, psychotherapy, or both)

Ask: "Young adults like yourself love to experiment with new things. Have you ever tried:

- Driving or cycling If yes advise to use seat belts and bicycle helmets
- Smoking or alcohol If yes offer motivational interview and smoking cessation
- Sexual activity: "being sexually involved with anyone (guys, girls, or both) in the past 6 months?" if yes: advise participation in school, faith, or community- based sex education programs and screen females for chlamydia and gonorrhea, discuss contraception and offer Pap smear [from 21 years every 3 years] and HIV screen annually.
- Violence: sensitively ask about history of abuse, low commitment to school, involvement in gangs, fear of assault: "We do have to ask some very personal or painful questions about what might have happened to you. I know it will be hard to answer some of these questions, but we are asking them so that we can take care of you to the best of our abilities". (Rotte & Lopez, 2012). If at risk: connect families with school-based programs, psychologists.

- IV drugs and substance abuse (CRAFFT questionnaire: car, relax, alone, forget, family or friends, trouble).

7. Assist: "Let's share a plan that is suitable to help you"

- a. Education about life style modification, injury prevention, and safe sex.
- b. Immunization: Influenza, HPV, varicella.

8. Arrange:

- a. Positive reinforcement "Many others did it before you, you can definitely do it, we are always available to support you".
- b. Referral for dental screening every 6 months.
- c. Follow up, safety netting, red flags (suicidality if depressed).
- d. Give away reading material.

9. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Sleep Hygiene

Introduce yourself and establish good rapport

Ask:

Look for the causes of insomnia as 50% of sleeping disorders are secondary:

a. Sleep history: habits and pattern

b. Medical history:

- Cardiovascular system: as orthopnoea, paroxysmal nocturnal dyspnoea, or respiratory as chronic obstructive lung disease, obstructive sleep apnoea: "Do you feel short of breath at all? How about when lying flat?"
- Gastrointestinal system: as gastro-esophageal reflux disease: "Do you feel any burning sensation in your chest at all?"
- Renal as UTI, or incontinence: "Do you have any burning sensation in urine?" "Do you wake up at night to go to the toilet? If yes, how often?"
- Endocrine as hyper or hypothyroidism, or diabetes: "Do you have difficulty staying still or unexplained weight loss?" "Do you have cold intolerance or constipation?" "Do you go to the toilet or need to drink frequently?"
- Osteoarthritis of the knee, or back pain: "Do you have any pain from any source?"
- Psychiatric problem such as anxiety, depression, schizophrenia, delirium: "How do you describe your mood?"

c. Drug history:

- Sedatives such as alcohol, benzodiazepines, and barbiturates.
- Stimulants as amphetamines, caffeine.
- Antihistamines, decongestants, aminophylline.
- Cigarettes smoking.

d. Social history: marital conflict, recent travel with possible jet lag, work or home related stress (shift-work).

Advise:

a. "The amount of sleep that a person needs for normal health varies with age and differs from person to person. For some adults, 4 hours a night is ample; for others, 10 hours is not enough. The average sleep for a 50-year-old is 7 hours a day." (Murtagh, 2012)

- b. "The problem arises when lack of sleep or too much sleep interferes with your activities during the day." (Murtagh, 2012)
- c. "Insomnia, which means 'poor sleep', is a lack of a adequate sleep, which may be difficulty getting off to sleep, difficulty staying asleep or waking early. It is a temporary problem in most instances and is usually due to a passing personal problem; however, sometimes it just happens for no reason." (Murtagh, 2012)

4. Assess:

- a. Motivation and willingness to follow above mentioned steps
- b. Previous attempts of changing sleeping pattern or taking any medications

5. Assist: "Let's share a suitable plan to help you sleep better. How about following this program strictly for several weeks to establish an efficient regular sleep pattern:"

- a. Exercise: "Fit people have better sleep quality. Do regular exercise late afternoon or early evening; avoid strenuous exercise two hours before sleep"
- b. Diet: "Avoid heavy meals or hunger at bedtime. If the latter occurs have light snacks, warm milk or herbal drinks"
- c. Caffeine: "Limit your consumption of coffee, tea, cola, chocolate, especially 5-6 hours before bedtime"
- d. Alcohol: "Avoid drinking 4-6 hours before bed, it causes sleep at beginning but it soon awakens you"
- e. Environment:
 - "Ensure quiet, secure, well-heated or cooled, and dimly lit bedroom"
 - "Have a comfortable bed and mattress"
 - "Avoid reading, or watching electronics (television, laptop or smart phones) in bed and don't use your bed as an office or workroom"
 - "Maintain regular bed and wake schedule. Set the alarm to the same rising time every day. Avoid naps and recover sleep to compensate for a previous bad night"
- f. "Every night, set a threshold time after which you should monitor sleepiness. If you are not sleep within 20 to 30 minutes, get out of bed, sit and relax in another room until you are sleepy or tired again. Repeat this step as often as required"

stage:

- Positive reinforcement: "Many others did it before you, you can definitely do it, we are always available to support you."
- Follow up soon in 2-4 weeks
- Refer; if required for any underlying condition that is causing the insomnia
- Brief assessment of underlying conditions; screening for age (vaccination)
- Give away reading material if available

Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Gastro-Esophageal Reflex Disease and Heartburn

Introduce yourself and establish good rapport

2. Ask:

- a. Discover the problem: nature of symptoms (heart burn, regurgitation, chronic cough, halitosis, or hoarseness of voice), onset of symptoms, aggravating factors (bending over or lying down), and relieving factors (antacids).
- b. Exclude red flags (pain radiating to left shoulder, shortness of breath, dysphagia, odynophagia, upper or lower GI bleeding, weight loss).
- c. Risk factors:
 - Normal variants: older age, pregnancy
 - Past medical history: obesity, diabetes mellitus (gastroparesis), hiatus hernia
 - Medications: non-steroidal anti-inflammatory drugs (NSAIDs) use
 - Social habits: diet (caffeinated or carbonated foods or drinks, peppermint or mint, chocolate, citrus, high fat food, milk, onions, garlic, spicy foods, tomato juice), smoking, alcohol
 - Family history of gastro-esophageal reflux disease or heartburn
- d. Treatment used so far (antacids, proton pump inhibitors, surgeries).
- e. Patient's ideas, concerns, and expectations (ICE) about the condition.

3. Advise:

- a. "Heartburn is not a disease but a symptom of burning discomfort in your chest, usually associated with an acid taste in the mouth. It is also referred to as indigestion or dyspepsia and is associated with drinking and eating." (Murtagh, 2012)
- b. "It is usually caused by reflux of the acid contents of the stomach back up the esophagus and sometimes into the throat. A peptic ulcer may cause it. Reflux occurs because the valve made by a ring of muscle at the junction of the esophagus and stomach does not close fully, and may be associated with a hiatus hernia." (Murtagh, 2012)
- c. "Things that aggravate the problem include: particular food (as onion, pies, pastries, fries), certain drinks (as wine, coffee), chewing

gum, stress, pregnancy, old age, certain drugs (as aspirin), obesity). (Murtagh, 2012)

Assess: Knowledge about red flags and precautions to take. If you have any of the following go immediately to the emergency department:

- a. Severe chest pain
- b. Vomiting blood
- c. Dark, tarry stool
- d. Difficulty swallowing

1st:

a. Ways to prevent heart burn are:

- "Have small frequent meal"
- "Make new life style modification: Have a plan to lose some weight and avoid excessive physical activity such as running"
- "Avoid foods that upset you"
- "Avoid tight fitting clothes"
- "Avoid bed time eating or snacks"
- "Stay upright for more than or equal to 3 hours after a meal"
- "Elevate the head of your bed (use 3 pillows or incline the bed to 45 degrees)"
- "If possible, avoid non-steroidal anti-inflammatory (NSAIDs) drugs"
- Smoking cessation

b. What complications to avoid:

- Esophageal ulcer, hemorrhage or perforation
- Barrett's esophagus (a change in the lining of the esophagus that can increase the risk of cancer)
- Bronchospasm (irritation and spasm of the airways due to acid)
- Chronic cough or hoarseness of voice
- Dental problems
- Stricture (a narrowing of the esophagus due to scarring)

Arrange for treatment and help to improve compliance

a. Management options:

- Pharmacological:
Proton pump inhibitors or antacids

- H2 receptor antagonist
- Surgical: fundoplication, with or without hiatal hernia repair

- b. Effect and side effect of the drugs such as chronic use of proton pump inhibitors increases the risk of *Clostridium difficile* infection, vitamin B12 deficiency, osteoporosis and community acquired pneumonia
- c. Give educational material
- d. Follow up in 4 weeks.

7. Communication skills: ensure organized approach, mixed questioning (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Epilepsy

Introduce yourself and establish good rapport

• Ideas, concerns, and expectations (ICE) (new diagnosis of epilepsy and does not know how to cope; epileptic non-compliant due to medication side effects; pre-employment counselling; epileptic who wants to drive, pre-marital counselling)

(b) Other medical problems

Medications and compliance

(c) Social history: age, marital status, smoking, alcohol, driving, occupation

(d) (e)

Knowledge about epilepsy "It is a common disorder (1 in every 100 person), that runs in families, in which a person is prone to having recurring seizures. A minor fault, in the complex electrical circuits in the CNS for an unknown reason, results in brief brain dysfunction. The various symptoms depend on what part of the brain is affected. Seizures can range from generalized seizures to partial ones". (Murtagh, 2012)

"As your doctor, I think it's very important for you to know that most patients with epilepsy can achieve complete seizure control and lead a normal life (marry, have normal sexual life, and have children)"

a. Medications:

- Compliance: "Take your medication regularly. If you suddenly stop them this could precipitate a severe fit"
- Side effects: "If you get fever, rash, mouth ulcers, bruising or bleeding please contact your physician"
- Avoid precipitating factors (fatigue, physical exhaustion, stress, sleep deprivation, hunger, flashing devices as television or cinema screens)

b. Driving and occupation

- Inform the driving licensing Authority: "You will not be able to drive till you are fit free for a period of 1 to 2 years."
- "People with epilepsy can hold down most jobs

except that they should not operate heavy machinery because the medications common cause drowsiness"

- c. Home environment
 - "Avoid potentially dangerous sites or activities when alone (kitchen, bath tub)"
 - "Please do not lock bathroom doors"
- d. Sports:
 - "Avoid swimming, cycling, or rock climbing when alone"
 - "Avoid boxing"
 - "You can enjoy playing football"
- e. "Wear an epilepsy card or bracelet with details of fits, medications, and your physician and hospital number"
- f. Female patients:
 - Antiepileptic may reduce the efficacy of oral contraceptive pills. You will need dual contraceptive methods (Mirena intra-uterine device (IUD) or Injectable are more suitable)
 - "If you wish to get pregnant, discuss this with your doctor first. You will need prenatal folic acid supplements to prevent back bone anomalies (neural tube defects) and prophylactic vitamins to prevent neonatal bleeding"

4. Assess:

- a. Re-explore ideas, concerns and expectations.
- b. Level of understanding
- c. Knowledge about red flags and precautions to take

5. Assist: "Let's share a plan which is suitable for helping you"

- a. "Ensure compliance and regular follow up"
- b. "Ensure safe environment during attacks"
- c. "Inform responsible person at work or school. When in seizure do not restrain, try to stop the fit, or force anything into the mouth just roll the seizing patient to one side and keep in a safe environment"
- d. "Have rectal valium at home in case of intractable seizures (status epilepticus)"

Stage 6:

- Follow up and monitor drug levels.

Invite to bring close relatives, friends or colleagues to be educated about dealing with him or her in case he or she develops a fit. Say "When it lasts more than 20 minutes with no consciousness between attacks this is called status epilepticus. You will need a suppository to stop it and then you have to be taken immediately to the emergency".

Anticipate complications, safety netting, red flags

Brief assessment of underlying conditions, age appropriate screening

Give away reading material if available

Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and focus on patient's ideas, concerns and expectations.



Obesity

Introduce yourself and establish good rapport: "The decision of reducing weight is probably the best one that you take in your life and we are here to support and help you".

2. Ask:

- a. Current weight, height, and body mass index?
- b. How long has the patient been obese?
- c. What about during your childhood: obese, dysmorphic feature, short stature, stunted growth?
- d. Medical history: Diabetes Mellitus, hypertension, coronary artery disease, Hyperlipidemia, smoking, obstructive sleep apnea, knee osteoarthritis, gastro-esophageal reflux disease, cancers
- e. Regular use of any meds including steroids, oral contraceptive pills, antidepressants, antipsychotics, antiepileptics.
- f. Rule out organic causes: Hypothyroidism (constipation, fatigue, cold intolerance), or polycystic ovarian syndrome (irregular menses, hirsutism, acne)
- g. Previous trials to reduce weight (medical or surgical, reasons for failure)
- h. Social History: self image or feeling and impact of obesity in social
- i. Explore ideas, concerns, and expectations (ICE)

3. Advise:

- a. "Being your doctor, I think it is very important for you to start losing weight"
- b. "Obesity is a behavioral, socio-cultural problem and occurs when you have an unbalance between your intake and energy use".
- c. SRS:
 - Relevance: List the personal and health advantages of losing weight. Link the obesity to the current medical condition if present: "Losing weight will help improving your sugar control, knee pain...etc. Moreover, weight loss will give you a nice body shape, and this will boost your self-esteem".
 - Risks: "Do you know how obesity can affect your life?" If no, explain: "It has been proven by studies to be an independent risk factor for Diabetes Mellitus, hypertension, ischemic heart disease, infertility, and

cancers. It also has a negative effects on mood and social interactions".

- Rewards: "I am sure that you will gain many rewards from losing weight and reaching your target weight. Losing weight will have significant impact on your general well-being"
- Roadblocks: "Set a date and share it with family and friends. Do you think of anyone who can stand between you and this achievement? Are you worried about the reaction of a friend or family to your decision?"
- Repetition: Remember its all about your health, you can do it.

Q: "Do you know about the different methods that are available to help you?"

Assess: Ask the patient:

"On a scale of 0 to 10, how confident are you that you can loose weight?"

"On the same scale, how motivated you are to loose weight?"

Stage on behavioral change cycle according to motivation and willingness to lose weight (precontemplation, contemplation, preparation, action, maintenance)

Tell the patient: "Ask family members to help you and list down roadblocks that you might face and ways to avoid them"

Life style modification:

- Diet:
 - "Be sensible with your plan. Do not crash diet but set a goal over 6 to 12 months"
 - "Avoid fast food, dense carbohydrates, and fried food. Avoid spicy food, peanuts, chocolates, and ice cream. Go for natural food and eat rather than drink your calories"
 - "Have grilled or boiled meat and egg 3 times per week"
 - "Increase fruits and vegetables intake (boiled and fresh)"
 - "Do not eat too fast. Chew food adequately"
 - "Do not eat in front of the television, or while driving"

- "Eat in small plates and do not eat leftovers"
- "Eat 5 to 6 times a day, 3 meals with small healthy snacks"
- Explain to the patient the idea of the healthy plate [1/2 of the plate should consist of vegetables or fruits, 1/4 of it whole grain & 1/4 protein]
- Exercise
 - "Choose a sport that you like (tennis, swimming, golf, or cycling) and do it regularly"
 - "A good start can be a brisk walk for 20 to 30 minutes per day at least 5 times per week"
 - "Choose to be active during your whole day: walk at every opportunity. Take the stairs instead of lifts"

c. Hints to help:

- "Keep a diary to record type of food you eat and your total calories"
- "Avoid shopping when feeling hungry. Always shop with a previously prepared list. Let someone else shop for you"
- "Weight yourself weekly"

d. Medications: only 2 are FDA approved:

- Orlistat: around 2.6 kg weight loss per month. Side effects include severe liver disease (rare - therefore monitor the liver functions)
- Sibutramine: greater weight loss per month. Side effects include arrhythmias and cardiac arrest (so not suitable for cardiac patients)

e. Surgeries (if body mass index more than or equal to 40, or index more than or equal to 35 with obesity related comorbidities)

- Gastric Band
- Sleeve gastrostomy
- Roux-en-Y gastric bypass

6. Arrange:

- a. Positive reinforcement: "Many others did it before you, you can definitely do it, we are always available to support you. We will work together even after losing weight to help you in maintaining your weight for the first 2 years. This will help in stabilizing your weight onwards".

Examination: Short stature, moon-face, body mass index, hirsutism, striae, waist- hip ratio (trunkal obesity)

Labs: luteinizing hormone to follicle stimulating hormone (LH to FSH) ratio Polycystic ovarian syndrome, thyroid stimulating hormone, insulin-like growth factor, cortisol, and cardiovascular risk factors: glucose, lipids

Follow up: routine in 2 weeks: "I expect you to loose 1-2Kg by then and any time in between that you feel you are out of track"

Referral to dietician, bariatric medicine or surgery clinic, and stress management sessions

Teach coping strategies and how to cope with life stressors.

Brief assessment of underlying conditions, perform age appropriate screening.

Give away reading material if available

Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Smoking Cessation

1. Introduce yourself and establish good rapport
2. Ask:
 - a. "At what age did you start smoking?"
 - b. Types, amount, and frequency of use:
 - Smoking Shisha approximately accounts for 39 to 40 cigarettes
 - Smoking Pipe almost accounts for 7 to 10 cigarettes per inhalation (there are mild, moderate and heavy types depending on the amount of the pure Nicotine that it contains).
 - c. "Have you ever felt you should cut down your smoking?"
 - d. "Have people annoyed you by criticizing your smoking?"
 - e. "Have you ever felt bad or guilty about your smoking?"
 - f. First smoking session of the day (eye opener (occurs within 15 minutes of waking up and indicates severe addiction))
 - g. Previous attempts to quit (number, length, methods-used, perceived reason of failure)
 - h. Past medical history: Diabetes Mellitus, hypertension, coronary artery disease, Asthma
 - i. Alcohol or drugs use
3. Advise: "Being your doctor, I think it is very important for you to quit smoking". Discuss the 5Rs:
 - a. Relevance: Link the smoking to the current medical conditions.
Briefly list the advantages of quitting: within ...
 - 20 minutes: BP, pulse, peripheral temperature normalize
 - 8 hours: CO levels in the blood normalize
 - 2 days: Improved ability to smell and taste
 - 3 days: Breathing gets easier as bronchial tubes relax and lung capacity increases
 - 1 month: mucus in the lung loosens and lung functions and circulation improves
 - 2 months: Blood flow more easily to the arms and legs, lung function increases up to 30%
 - 3 months: Lung become more healthy, you breathe more easily, you get fewer colds
 - 1 year: risk of sudden death from heart attack is lowered

- 5 years: 50% reduction in lung cancer death rate for the average smoker
- 10 years: risk of sudden heart attack and stroke equals to that of non smokers and risk of cancer drops significantly

b. Risks: "Do you know how smoking can affect your life?" If no, explain.

c. Rewards: "I am sure that you will gain many rewards from quitting. It will have significant impact on your general well-being."

d. Roadblocks: "Set a date and share it with family and friends. Do you think of anyone who can stand between you and this achievement? Are you worried about the reaction of a friend or family to your decision?"

e. Repetition: "Remember its all about your health, you can do it".

LESSON:

a. "On a scale of 0-10, how confident are you that you can quit?"

b. "On the same scale, how motivated you are to quit smoking?"

c. Stage on behavioral change cycle according to motivation and willingness to quit (precontemplation, contemplation, preparation, action, maintenance)

1st: "Let's share a plan which is suitable for helping you quit smoking"

Set a quit date

Address psychosocial fears, family and friends support

Avoid smoking cues: coffee, stress, etc.

Patient can keep cigarettes box away, to take time to reach it
He or she may stay away from smoking environment to decrease its need and feeling of urge to go back to that habit

Gradual reduction in amount of smoke (progressive restriction)

Use alternatives: gum, hand activity, get involved in sports

Pharmacological methods:

- Nicotine patch, gum, Inhaler, spray, or lozenge. Side effects: Gastrointestinal distress; mouth, throat, or skin irritation. (American Academy of Family Physicians, 2012)
- Bupropion: Begin therapy 1 to 2 weeks before the quit date, continue until 12 weeks to 6 months after the quit date. Dosage: 150 milligram (mg) at the morning for 3 days, then increased to 150 milligram (mg) twice daily. Effectiveness increases if combined with a nicotine replacement therapy. Side effects: Insomnia and dry

mouth. Contraindicated in persons with seizure or eating disorder, and in those who have used a monoamine oxidase inhibitor in the past 14 days. May increase suicidality in patients with depression. (American Academy of Family Physicians, 2012)

- Varenicline (Chantix): Begin therapy 1 week before quit date and continue for 12 weeks. Dosage: first 3 days: 0.5 milligram (mg) per day, the next 3 days: 0.5 milligram (mg) twice daily, thereafter 1 milligram (mg) twice daily. Expensive. Should not be combined with a nicotine replacement therapy. No drug interactions. Side effects: headache, nausea, insomnia, abnormal dreams, neuropsychiatric symptoms, flatulence, increase risk of cardiovascular events in patients with cardiovascular disease (less side effects in comparison to Bupropion). (American Academy of Family Physicians, 2012)

- i. Educate the patient about side effects of smoking cessation:
 - Weight gain
 - Headache
 - Anxiety
 - Nausea
 - Craving for more tobacco (As Nicotine creates a chemical dependency)

6. Arrange:

- a. Positive reinforcement: "Many others did it before you, you can definitely do it, we are always available to support you"
- b. Follow up soon
- c. Referral to smoking cessation clinic
- d. Anticipate withdrawal, weight gain
- e. Brief assessment of underlying conditions, age appropriate screening
- f. Give away reading material if available

7. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Alcohol Misuse Counseling

Introduce yourself and establish good rapport

Ask:

- Ideas, concerns, and expectations (ICE): any presenting problem? The role of drinking or drug use in it
- Use one of the following questionnaires: "Now I am going to ask you some questions about your use of alcoholic drinks in the past year."
 - * AUDIT-C questionnaire (Were high risk drinkers score: 5):
 - How often do you have a drink containing alcohol?
 - Never (0)
 - Less than or equal to ever month (1)
 - 2 to 4 times per month (2)
 - 2 to 3 times per week (3)
 - More than or equal to 4 times per week (4)
 - How many drinks containing alcohol do you have on a typical day when you are drinking?
 - 1 or 2 (0)
 - 3 or 4 (1)
 - 5 or 6 (2)
 - 7 or 9 (3)
 - More than or equal to 10 (4)
 - How often do you have 6 or more drinks on one occasion?
 - Never (0)
 - More than every month (1) Monthly (2)
 - Weekly (3)
 - Daily or almost daily (4)

CAGE questionnaire:

- Have you ever felt you needed to Cut down on your drinking?
- Have people Annoyed you by criticizing your drinking?
- Have you ever felt Guilty about drinking?
- Have you ever felt you needed a drink first thing in the morning (Eye-opener) to steady your nerves or to get rid of a hangover?

Alcohol and other drug use:

- Since when: age of onset and duration of alcohol use
- Quantify intake in units of alcohol per day and week (1 unit equals ½ pint of ordinary strength beer, lager or cider equals a small glass of wine equals a single shot of spirits (including vodka, whiskey, gin) equals a small glass of sherry equals a single measure of aperitifs). The recommended safe limits are 21 units per week for males and 14 units per week for non-pregnant females.
- Drinking triggers
 - Features of tolerance: "Do you need to increase the amount of alcohol intake to get the desired effects?"
 - Features of dependence: compulsion to drink, primacy of drinking over other activities, inability to control use, tolerance, or withdrawal symptoms (anxiety, sweating, nausea, seizures, delirium tremens). History of withdrawal increases likelihood of withdrawal on quitting.
 - Other drug use (tobacco, oppioids, or illicit drugs)
- Effect on quality of life: relationship, occupation, driving under alcohol effect
- e. Past medical history: Diabetes Mellitus, hypertension, coronary artery disease, asthma

3. Advise: In a non-judgmental but persuasive manner: "As your doctor, I think it is very important for you to quit drinking". Discuss the 5Rs:

- a. Relevance: Link the alcohol misuse to the current medical condition
- b. Risk: "Do you know how alcohol abuse can affect your life?". If no explain:
 - Biological effects on gastro-intestinal (mainly the liver), cardiovascular, and neurological systems along with the increased risk of trauma or falls.
 - Mental problems: violence, suicide risk, depression, anxiety, and psychosis.
 - Social function decline: inability to drive, compromise relationships, employment, financial status, housing, and may lead to legal obligations.
- c. Rewards: "I am sure that you will gain many rewards from quitting. It will have significant impact on your general well being"
- d. Roadblocks: "Set a date and share it with family and friends. Do you think of anyone who can stand between you and this achievement? Are you worried about the reaction of a friend or family to your

decision?"

e. Repetition: "Remember its all about your health you can do it."

Assess:

- "On a scale of 0 to 10, how confident are you that you can quit?"
- "On the same scale, how motivated you are to quit?"
- Stage on behavioral change cycle according to motivation and willingness to quit (precontemplation, contemplation, preparation, action, maintenance)
- Examination and investigations.
 - Mental state (general presentation, cognition, memory, mood, speech, thought perception, insight)
 - Consider breath alcohol test, blood tests (liver function test including GGT, full blood count, urea and electrolytes, vitamin B12 level)

Assist: "Let's share a plan which is suitable for helping you to reduce drinking"

- Set a quit date, or decide to gradually reduce the intake (by switching to low-alcohol beer, alternating alcohol with non-alcoholic drinks, reducing drink size, eating during drinking sessions).
- Address psychosocial fears, family and friends support
- Identify high-risk situations and practical ways to deal with these. Ask the patient to avoid drinking cues: stress, late night gatherings, etc.
- Plan an alternative focus for socializing or relaxing.
- Consider pharmacological therapy:
 - Treat any withdrawal symptoms with long term use of low dose benzodiazepines, clonidine and anti-convulsant (barbiturate, carbamazepine).
 - Treat alcohol dependence with: disulfiram [inhibits the desire effect when drink alcohol. If used monitor liver function tests], naltrexone (opiod antagonist), acamprosate and cognitive behavioral therapy (CBT).

Arrange:

- Positive reinforcement: "Many others did it before you, you can definitely do it, we are always available to support you."
- Follow up in 2 weeks or earlier If any withdrawal symptoms
- Refer to psychologist (control drinking strategies, or re-appe

- prevention strategies) and social worker (to coalesce with the family or work)
- d. Rule out red flags: risk of harm to self or others, serious physical or mental illness, medico-legal requirements (driving or secondary to abuse)
- e. Brief assessment of underlying conditions, age appropriate screening
- f. Give away reading material if available

7. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Vaccinations for Adult with Diabetes Mellitus

Introduce yourself and establish good rapport

Ask:

- Ideas, concerns, and expectations (ICE)
- History (onset of Diabetes Mellitus, treatment, control, other chronic diseases, screening)
- Risk factors: health worker, surgery, contact, travel, asplenia, intravenous drug use, homosexual, chronic liver, renal, or heart disease

Advise: "As your doctor, I think it's very important for you to get proper information about needed vaccines for patients with Diabetes Mellitus. This is because Diabetes Mellitus decreases the immunity and therefore you need to be protected."

Assess:

- "Have you taken any vaccines as an adult so far?"
- "Have you ever had severe allergic reaction to vaccines taken before?"

Ask: "Let's share a plan which is suitable for you"

- Protection against seasonal flu annually: by intramuscular injection of inactivated influenza vaccine or influenza nasal spray (contraindicated in pregnant ladies and immunocompromised. It is relatively contraindicated if the patient has taken antiviral drugs within the previous 48 hours, has had severe allergic reaction to vaccine components or egg. Or had severe reaction to the injection previously (example: Guillain Barre syndrome)).

- If the patient states that he or she has an egg allergy:
 - Can the person eat lightly cooked egg (example Scrambled egg) without a reaction? If yes administer any influenza vaccine
 - If the reaction consists of hives or if the reaction causes only hives. If yes administer any influenza vaccine and observe the patient for 30 minutes
 - If he or she develops symptoms other than hives (example: Hypotension, wheezing, perioral swelling), refer to Infectious disease department where expertise in management of severe allergic

reaction is available for the vaccine to be given.

- Tetanus, diphtheria, and acellular pertussis (Tdap). (Against diphtheria, whooping cough and tetanus [lock jaw]): One dose of Tetanus, diphtheria, and acellular pertussis (Tdap) for adults above 18 years of age, otherwise tetanus and diphtheria (Td) booster every 10 years. Also recommended in the third trimester of each pregnancy if high risk (outbreak of pertussis in the community).
- Pneumococcal polysaccharide vaccine (PPSV23): every 5 years up to more than or equal to 65 years of age (against pneumonia and other pneumococcal diseases), especially if the patient is an adult (19 through 64 years of age) who smoke cigarettes or who have asthma. After the age of 65 years, give a second dose if has been more than or equal to 5 years since the first dose. (Contraindicated if there is severe allergic reaction to its contents).
- Hepatitis B vaccination series.
- Hepatitis A (if high risk: living in or traveling to endemic area or food handler or healthcare provider).
- Zoster vaccine: if more than or equal to 60 years.
- Human papilloma virus (HPV) vaccine: if man or woman up to the age of 26 years.
- Measles, Mumps and Rubella (MMR) vaccine: If born more than or equal to 1957 and have not gotten this vaccine, have no immunity to these diseases, or is an international traveler.
- Varicella vaccine: if born more than or equal to 1980 and have not gotten 2 doses of this vaccine or have not developed natural post-infection immunity to this disease. Explain to the patient: "Some people who are vaccinated against chickenpox may still get the disease. However, it is usually milder with fewer blisters and little or no fever."

6. Arrange:

- Positive reinforcement.
- Anticipate complications:
 - Observe for 15 minutes post-vaccine in order to detect early and manage anaphylaxis or vasovagal syncope.
 - Apply cold compression at the site of the injection to decrease swelling and pain.
 - Take paracetamol for any fever.
- Safety netting: "If you develop any skin rash, lips swelling or shortness of breath, please seek medical attention immediately."

- d. Follow up: for annual diabetes examination date, follow-up lab results
- e. Brief assessment of underlying conditions and screening for age
- f. Give away reading material if available

Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Glucometer Use

1. Introduce yourself
2. Establish good rapport (address the patient by name)
3. Explain the device's:
 - a. Name: "Glucometer is a medical device for determining the approximate concentration of glucose in the blood"
 - b. Purpose: "This helps you determine how well controlled you are"
 - c. Show the patient the glucometer and explain its parts (Meter, test strips, lancet, and lancet's pen). Explain: "Always check the expiry date of the lancets, and double-check that the meter is working prior to use"
 - d. Explain the steps of usage: "It is very important to use your glucometer correctly as it will provide you with instant feedback and let you know immediately what your blood sugar level is (too low, too high or in the good range). Keeping a record of your results gives your doctor an accurate picture of how your treatment is working. It's small and easy to take with you. You can test anywhere, and anytime:"
 - "Wash your hands for 15 seconds, dry them, and get your equipment"
 - "Open the lancet pen and put a lancet in. Adjust the lancet to the shallowest depth that allows the blood drop to fall out freely (avoid squeezing the finger as this will denature the blood and give false readings). Take the cap off the lancet without touching it, and cover the pen"
 - "Pull out a test strip and put it in the meter to turn it on. Double check that the code that appears on the meter's screen matches that on the test strips' bottle"
 - "Wait until a test strip symbol flashes on the screen before you draw the drop of blood"
 - e. Checking Blood Sugar:
 - "Pierce yourself using the lancet pen against the outer or inner borders of one of your fingers (avoid finger tips that are rich with nerves, thus painful). Do not use the same finger or side every time"
 - "Allow the blood drop to form freely, and then approximate the test strip to absorb it. Be sure that the test area on the strip fills completely with blood"

- "Place the test strip in the meter and wait for the reading on the screen. Record it in your logbook or diary."

f. Demonstrate to the patient all the steps

g. Let him or her do it and observe to correct

h. Advise the patient about cleaning up the supplies:

- "With every use: throw the test strip in the trash, and the needle in a puncture proof container with all d (such as an old bleach or detergent bottle)"
- "Store your equipment or medications away from children and pets"

Encourage any questions

Ensure:

1. Positive reinforcement: "Many others use it, you can definitely use it correctly" "We are always available to support you"
2. Patient understands side effects: risk of infection (decreased by hand-washing), pin-prick pain on needle use

arranging a follow up (in 2 weeks) to check the results and adjust medications

and away reading material if available

Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and focus on patient's ideas, concerns and expectations.

Insulin Use

1. Introduce yourself and establish good rapport (address the patient by name)
2. Explain what the medication is :
 - a. Name: Insulin Injection or pen
 - b. Purpose: "Provides the body with the insulin that it lacks, In order to regulate its utilization of sugar"
 - c. Show the patient the insulin injection or pen and explain its parts
3. Explain the steps of use: "The proper technique is very important to ensure that your body benefits from the medication used":
 - a. "Wash your hands for 15 seconds, dry them, and get your insulin ready (cleaning the skin with an alcohol swab is not necessary)"
 - b. For insulin in syringe:
 - "Get your supplies": insulin vial (double-check that it is the right kind of insulin and that the fluid is clear with no clumps); proper sized syringe (for 50 to 100 units use 1 milliliter (mL) syringe, for 30 to 50 units use 0.5 mL syringe, for less than 30 units use 0.3 milliliter (mL) syringe), needles and alcohol pads.
 - "Prepare the insulin injection":
 - Only for intermediate or long-acting insulin: "gently mix by turning the bottle on its side and rolling or rubbing it between the palms of your hands. Do not shake the bottle because shaking can make the insulin clump together"
 - "Prepare the insulin bottle: If the insulin bottle is new, remove the cap. Clean the top of the insulin bottle with an alcohol pad before you put a needle into it"
 - "Pull air into the syringe and inject it into the vial (to increase its pressure)"
 - "Pull the plunger to fill the syringe with just a little more than the insulin dose you need"
 - "Release any air bubbles from the syringe: tap the syringe with your finger to make them rise to the top. Slowly push in the plunger just enough to push out the air and the extra insulin"
 - "Prepare for injecting the insulin":

- "Change the needle before injecting yourself (as it gets blunter when it is pushed into the vial)"
- "Use areas with good layer of fat under the skin (2.5 centimeter can be pinched between two fingers), as this is the place that you want the insulin to stay and slowly go to the blood. Use the abdomen below the navel, outer part of the thigh or arms, or buttocks"
- "Lift up or pinch the skin and insert the needle perpendicularly using your dominant hand (hold the syringe between your thumb and middle finger). Push the plunger using your index finger all the way down. Keep the needle in for 10 seconds (to avoid insulin leakage after withdrawal of the needle). Quickly withdraw the needle. Press down firmly (do not rub or massage) over the injection site for up to 60 seconds".

For insulin pen:

- "Get your supplies": Insulin pen (double-check that it is the right kind of insulin and that the fluid is clear, colorless, with no clumps, and not expired), insulin cartridge (follow the pen manufacturer's instructions for inserting an insulin cartridge into a reusable pen), disposable needles, their cap and alcohol pads.
- "Attach the disposable needle to the pen":
 - "Remove the pen cap. Clean the rubber seal on the insulin cartridge with a sterile alcohol swab"
 - "Attach the disposable needle to the pen. Remove the outer needle cap and save it to use after your injection. Remove the inner needle cap and throw it away"
- "Prepare the insulin":
 - "Gently mix it by turning the pen upside down for 10 times"
 - "Prime the pen before each injection. This releases a small amount of insulin into the needle in order to get rid of any air bubbles and ensure the use of correct dose. Point the needle up. Tap the insulin cartridge to force any air bubbles to the top. Dial 2 units of insulin on the dose selector. (In most insulin pens, you will

Counselling Stations

hear a click for each unit of insulin that you have dialed)

Firmly press the plunger until a drop of insulin appears at the needle tip. Repeat this step if a droplet does not appear, or change the needle if you had to repeat several times"

- "Return your dose selector to "zero" and dial the correct dose (make sure there is enough insulin in the pen for your full dose)"
- "Lightly pinch a fold of skin and insert the injection perpendicularly. Push the plunger all the way in and keep pressing it for a count of 5-10 before you remove the needle from the skin. Gently apply pressure on the injection site, but do not rub it"

4. Demonstrate to the patient all the steps.

5. Let him or her do it and observe to correct

6. Advise the patient:

- a. "To decrease the pain: "keep your insulin out of the refrigerator for 30 minutes prior to use, allow alcohol to dry before pricking yourself, relax the muscle at the injection site, and avoid changing the direction of the needle during insertion and removal"
- b. "Rotating the injection site is very important to avoid complications (lipohypotrophy or lipohypertrophy). "Always keep distance of 3 centimeter (1.5 inches) from the last injection site"
- c. "Use a new needle every time you inject insulin and dispose it in your sharp trash after use. Do not store the insulin with the needle attached"
- d. "Store all your unused medications in the refrigerator (not the fridge). Keep the currently used pen (not insulin vial) at room temperature. At all times keep away from reach of children"
- e. "When traveling, your insulin should be kept in your handbag not your luggage (you will need a prescription for the airlines to allow that)"
- f. "If you are traveling in the car for long time, use ice-bags to avoid damaging the insulin"
- g. "If you forget your insulin in hot place or where direct sun light is present, discard it"

7. Encourage any questions
8. Ensure:
 - a. Positive reinforcement: "Many others use it, you can definitely use it correctly" - "We are always available to support you"
 - b. Patient understands the doses
 - c. Patient understands side effects including hypoglycemia and ways to manage it
 - d. Arrange follow up
 - e. Give away reading material if available
9. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Diabetes Mellitus Foot Care

1. Introduce yourself, and establish good rapport
2. Ask:
 - a. "How long have you been Diabetic?, treatment used?, level of control?"
 - b. Any previous foot injury, infections, nail problems, accidental foreign bodies (indicates loss of sensation)
 - c. Any end organ damage: kidney (deranged glomerular filtration rate (eGFR) or microalbuminuria), eye, or cardiac disease (angina or myocardial infarction)
 - d. Ideas, concerns, and expectations (ICE): medication, vaccination, care related to underlying condition
 - e. Brief past medical, family, and social histories along with the vaccination status
3. Advise: "Feet problems among Diabetes Mellitus patients are common, treating them early is very important to prevent serious complications. This is because; healing is slow in diabetics due to the decreased blood supply and less sensitive nerves"
4. Assess: Current care routine, ability of patient to take care of the foot (limited by obesity), availability of family support
5. Assist: "Most people can prevent any serious foot problem by following some simple steps. So let's share a plan that suits you ..."
 - a. "Wash and thoroughly dry between your toes daily. Do not check the warmth of the water with your foot. Apply petroleum jelly to prevent feet dryness"
 - b. "Use non-tight footwear, wear cotton socks, and avoid walking on bare feet"
 - c. "Check your feet in front of a mirror every night. Look for any complications such as wounds, corns, calluses, soggy skin between toes (fungal), ingrown toenails, or cracked heel. If any wound: simply wash it with tap water, cover it with clean gauze, see your doctor within 2 days maximum"
 - d. "Clip your toe-nails regularly (square shaped). Ask for help if you can't reach"
 - e. "Keep the blood flowing to your feet. Put your feet up when sitting. Wiggle your toes and move your ankles up and down for 5 minutes,"

2 or 3 times per day. Don't cross your legs for long periods of time.
Don't smoke"

5. "Keep your Diabetes Mellitus under very good control with regular visits to your doctor"

6. Arrange:

- Follow up: Annual foot exam and retinal screening, every 3 to 6 months for labs to check control level and screen for cardiovascular risk factors (hypertension or hyperlipidemia).
- Brief assessment of underlying conditions and age appropriate screening
- Give away reading material if available.

7. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Post Myocardial Infarction counseling

1. Introduce yourself and establish good rapport, and explore patient concerns, and expectations (ICE)
2. Ask and discuss:
 - a. "Are you aware of what happened to you?" if not, explain: "You had chest pain because your heart was short of oxygen due to a narrowing of the coronary arteries by a fat-like deposit"
 - b. "Now that you are out of the hospital, do you feel any residual symptoms?" fever, fatigue, light headedness, breathlessness, tingling sensation in the left-side of the chest, palpitation (as indication of ectopic beat),
 - c. "It must have been difficult to pass through. Can you describe your mood?" Look for anxiety(excess worries, Irritability) or depression (loss of interest, poor concentration, lack of energy, appetite, or sleep, feeling of guilt). (You may use PHQ-9)
 - d. "Have you been able to go back to your normal life?"
 - e. "What medications have you been put on? Have you been able to take them regularly?"
 - f. "Evaluate patient's life style and coronary risk: "So tell me about your routine. Do you exercise?"
3. Advise: "As your doctor, I think it's very important for you to prevent recurrence. You will need to minimize your risk factors":
 - a. Reduce your weight:]
 - b. Diet: "to prevent further fat deposits in the coronary arteries by reducing fat, sugar and salt and increasing fluid and fiber intake"
 - c. Exercise: "to improve your heart pumping capability, blood circulation in the body, and prevent a second event".
 - Explore: what are the exercises suitable for him or her? for example walking, jogging,
 - Advise: "Start slowly and gradually 3 times per week 10 to 30 minutes. Warm up before exercising
 - d. Avoid stress
 - e. Stop smoking
 - f. Take your medications: emphasize compliance with aspirin, angiotensin converting enzyme inhibitor and Beta-blockers
4. Assess:

Patient understanding, and ideas, concerns, and expectations (CE):

Stage on behavioral change cycle according to motivation and willingness to undergo life style modification (precontemplation, contemplation, preparation, action, maintenance):

Returning to different life activities:

- Driving: after 4 weeks (only short distances and avoid heavy traffic)
- Sexual activity: after 4 to 6 weeks
- Air travelling: after 4 to 6 weeks
- Job: after 4 to 12 weeks if and only if an exercise test is done and permits. Check how strenuous is her or his work to decide if modification is needed.

- b. Examination: vitals, body mass index, cardiovascular system examination (any signs of heart failure)
- c. Investigations: electrocardiogram (post-myocardial infarction baseline), cardiovascular risk assessment (Hemoglobin A1c, lipid profile), heart failure markers (B-type natriuretic peptide (BNP)), echocardiography (measuring the ejection fraction)

Arrange:

- a. Positive reinforcement: "Many others did it before you, you can definitely do it, we are always available to support you"
- b. Prescribe any medications
- c. Refer to:
 - Smoking cessation clinic
 - Dietician
 - Psychologist (Relaxation therapy and stress management techniques)
 - CPR training for the family
 - Cardiologist: if patient is a good candidate for revascularization
 - Electrophysiologist (if ejection fraction is low): to insert implantable defibrillator
- d. Brief assessment of underlying conditions, screening for age
- e. Follow up in 2 weeks or earlier if any red flags (recurrence of chest pain, rupture of papillary muscles (dizziness), congestive heart failure (lower limb edema), or Dressler syndrome (Fever, shortness of breath, pericarditis))
- f. Safety netting: "If you develop any chest pain or shortness of breath,

take nitroglycerin spray and come to the emergency"

g. Give away reading material if available

8. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Advising a Traveler

areas to focus on: High-risk travelers are immigrants who travel back to their home-countries as they misbelieve that they are immune against common infections.

Introduce yourself and establish good rapport

Ask:

- "First allow me to ask about your travel, if you do not mind". When, Where, Why and duration of stay
- "Do you have any idea about the travel precautions?"
- Ideas, concerns, and expectations (ICE): "Do you have any specific concerns or worries?" "Have you traveled earlier and had a problem with jet-lag or motion sickness?" examples include pre-Visa vaccinations, taking care of an underlying conditions or its medications. Tailor accordingly.
- Past medical history: Recent myocardial infarction (fit to fly after 4 weeks, surgery or stroke(fit to fly after 2 weeks). Epilepsy. Psychiatric disorders. Current pregnancy and last menstrual period (contraindication for some vaccines or medications. Only fit to fly if less than 32 weeks of pregnancy)
- Drugs (anti-coagulants) and allergies (latex, egg, or aspirin)
- Vaccination status

Advise, Assess, and Assist: After checking the endemic diseases at the destination on CDC yellow pages

Chronic disease's management:

- "Take enough stock of your medications and carry them in your handbag rather than in the luggage. Do not change the containers, but keep in own package. Take a copy of your prescription with you. Wear a bracelet that mentions your condition and medications taken"
- If diabetic on insulin explain dose adjustment:
 - Flying east and the day is less than 6 hours shorter, drop one dose.
 - Flying west and the day is more than 6 hours longer, add one dose.

Motion sickness:

- Explain: "A series of unpleasant symptoms (feeling unwell, drowsy, dizzy, irritable, headache, fullness in the stomach, nausea or vomiting) that occur due to sensitive inner ear canal when in a

moving vehicle".

- b. Prevention: "choose a seat between the wings of the airplane, avoid reading or looking at a computer screen, avoid drinking alcohol, avoid eating spicy, greasy or acidic food, eat light meals before the trip"
- c. Chemoprevention: Buscopan (20 mg tablet 30 minutes prior to departure and repeat every 6 hours if long flight), Benadryl or ginger chewing gum
- d. Red flags: fever, chills, sweating, nausea or vomiting

Deep vein thrombosis (DVT):

- a. Prevention: in long air flights take lots of fluids on board, minimize alcohol, have light meals, perform calf exercises
- b. Red-flags: swelling, redness, pain in one or both legs

Jet lag:

- a. Explain: "Your body has an internal clock that regulates your temperature, BP and hormones. When you cross more than 5 time zones in one day, especially when you travel eastward, your clock can get out of order leading to sleeping problems (mostly in the first 2 days)".
- b. Prevention: "To lower your chances of getting jet lag try to":
 - Before your flight: "get enough rest and avoid changing sleep patterns"
 - During your flight: "Drink lots of nonalcoholic drinks like water, Only have short naps if any"
 - On arrival: "try to change your daily routine to the new time-schedule as soon as possible. Some people find it helpful to take pills called melatonin at bedtime as they arrive. However, if you have epilepsy or taking medication to stop blood clotting, you should not take melatonin"

Traveler diarrhea:

- a. Prevention:
 - "Watch what you eat":
 - "Only eat in 5 stars restaurants. Avoid eating from open buffets, street-sellers, under cooked and reheated food"
 - "Peel your fruits and vegetables. Avoid fruit juices and fresh salads"

*Cipro 500
for 2 days*

- "Avoid drinking tap water or ice cubes that are made from it"
- "Avoid unpasteurized dairy products, open ice-creams, cold sauces or toppings"
- **Chemoprophylaxis:**
 - Fluoroquinolone: 1st line agent, 90% effective (ciprofloxacin 500 milligram (mg) twice daily for 1-2 days, not approved to be used in pregnant women and children).
 - Bismuth can also be used (262 milligram (mg), 4 times a day, for up to 3 weeks). 60% effective. Contraindications: patients with aspirin allergy, or patients on doxycycline for malaria prophylaxis. Side effects include black tongue or stool and tinnitus.
 - Azithromycin, 1000-milligram (mg) single dose is an alternative.

b. Red flags: dehydration (dry skin, dizziness, decrease urine output, increase heart beat)

c. Treatment:

- Fluid replacement is the most important for treatment.
- Antimotility agents can be combined with antibiotics except if there is blood in stool: loperamide (Imodium) take 2 tablets of the 2 milligram (mg) dose with the first loose motion. Then take one tablet with each bout of diarrhea without exceeding 4 tablets in 24 hours or phenoxyphate.
- Seek medical attention if symptoms don't improve after 48 hours

Mosquito-borne Infections (malaria, yellow or dengue fevers, Japanese encephalitis):

a. Prevention: "apply repellent with N,N-Diethyl-methyl-toluamide (DEETS) more than 30 to 50 with or without permethrin cream, avoid sleeping outdoors, use bed nets that are sprayed with DEETS, wear light-colored clothes that are long-sleeves (day-time to prevent yellow or dengue fevers, and night-time to prevent malaria)"

b. Malaria chemoprophylaxis - options include:

- * Atovaquone and proguanil (Malarone): Most expensive. 250 and 100 milligram (mg) tablet daily. Take 1 to 2 days prior, during, 1 week after travel. Side effects: Uncommon.

Contraindications: Breast-feeding or pregnancy.

- Mefloquine: 250-milligram (mg) tablet weekly. Take 1 to 2 weeks prior, during, 4 weeks after travel. Side effects: nightmares, depression. Contraindications: psychiatry, epileptic, or cardiac patients
- Chloroquine: 500-milligram (mg) tablet weekly. Take 1 to 2 weeks prior, during, 4 weeks after travel. Safe in pregnancy and for long travelers. Contraindications: psoriasis
- Doxycycline: Cheap. 100-milligram (mg) tablet daily. Take 1 to 2 days prior, during, 1 week after travel. Side effects: stomach upset, flare up of vaginal yeast. Contraindications: pregnancy or young children
- Primaquine: contraindicated in G6PDD

Tables prevention: "avoid reptiles and wild animals" bites. If any seek medical advice immediately"

Give recommended vaccines as per center of disease control's (CDC) pages and ensure up to date regular vaccines. Common vaccines includ-

- a. Yellow fever vaccine: single shot every 10 years. Only in patients 9 months-59 years old. Contraindications: sever egg or latex allergy, or immune compromised patients
- b. Japanese encephalitis vaccine: 2 shots before travel, 28 days apart, only in patient more than 2 months old with annual booster if more than 17 years old
- c. Hepatitis A virus vaccine: 2 shots, 6 months apart (protective 2-4 weeks after the first dose. Second dose results in long-term protection), only in patient more than 1 years old

Give general Advice:

- a. "Avoid swimming in lakes or rivers".
- b. "Use safe transportation: trains and buses are better than taking".
- c. "If you get sick, seek tertiary or university hospitals, as they usually follow updated practice"
- d. "Avoid sharing body fluids; diseases like Human Immunodeficiency virus infection can be spread through body fluids, such as saliva, blood, vomit, and semen. Protect yourself by using latex condoms correctly, do not inject drugs, and do not share needles or any devices that can break the skin. That includes needles for tattoos, piercings, and acupuncture. If you receive medical or dental care

make sure the equipment is disinfected or sanitized.
(Center for Disease Control and Prevention, travelers health)

Arrange:

- a. Refill meds, print a prescription or a simple report of underlying conditions (to be taken with him or her in case he or she ran out of them or had difficulty passing through the airport)
- b. Follow up PRN
- c. Safety netting: if any red-flags, seek immediate medical advise
- d. Brief assessment of underlying conditions, screening for age
- e. Give away reading material if available

Communication skills: ensure organized approach, mixed questioning style (open and close ended questions); active listening, clear language and reflection on patient's ideas, concerns and expectations.

Peak Flow Meter Use

1. Introduce yourself
2. Establish good rapport (address the patient by name)
3. Explain the device's:
 - a. Name: Peak Flow Meter (PFM)
 - b. Purpose: "Tells you how well your lungs are working with the current medications and serves as an early warning sign of deterioration"
 - c. Show the patient the instrument and explain its parts (clear plastic body, logarithmic scale, internal flow indicator with color zones, mouth piece)
4. Explaining and demonstrating to the patient how to use the device:
 - a. Ensure the pointer is at zero.
 - b. Proper posture: standing (sitting restrain diaphragm movement by stomach contents giving a false reading), avoid bending your neck down, no food or gum in the mouth
 - c. Hold the peak flow meter so that your fingers are clear of the scale
 - d. Breath in as deeply as possible and hold your breath
 - e. Place the mouthpiece well into your mouth (bite mouth piece lightly and seal your lips firmly around it). Ensure that you are not blocking the mouthpiece with your tongue or teeth. Blow as hard and as fast as you can
 - f. Write down the level (aside) and put the marker back to zero. Repeat the measurement 3 times and record the highest reading on the chart as your peak expiratory flow (PEF) L/min
5. Allow the patient to use the PFM by his or her own and tell you what the actual reading is, determine if he or she does that correctly
 - a. Determining the personal best peak flow number:
 - When you get out of this attack, measure your PFM daily between 12-2 pm, for 2-3 weeks so that you know your best Peak Expiratory Flow Rate (PEFR) number.
 - Record any event that has happened and might have exacerbated your cough (e.g. common cold).
 - You will notice that your readings will not form a flat line but more of a zigzag pattern, which is normal.

- b. Explain the peak flow zones and action plan:
- c. Based on the best PEFR number that you will get, we will develop an accurate action plan. Meanwhile, we will use a specific calculation formula that uses your age and height to estimate your expected PEFR.
- d. Using the readings, we develop an action plan to help you control your asthma and modify your treatment as needed. Possible readings are divided into different zones that are colored as the traffic light. Any drop below the zone means that you need to step up your medications:
 - Green zone:
 - a. More than or equal 80% of predicted PEFR
 - b. Means: Good control
 - c. Asymptomatic
 - d. Use daily long-term medications if any + rescue medications as needed before exercise
 - Yellow zone:
 - a. 50-79% of predicted PEFR
 - b. Means: Caution: asthma is getting worse
 - c. Mild symptoms (wheezing, coughing, waking at night)
 - d. Take a dose of the rescue medication and repeat the reading in an hour. If you go back to the green zone then well and good. Otherwise repeat a rescue dose. Then arrange an appointment with me so that we adjust your therapy.
 - Red zone:
 - a. Less than 50% of predicted PEFR
 - b. Means: medical alert
 - c. Severe symptoms: Shortness Of Breath (SOB), decreased activity tolerance
 - d. Take a rescue medication as well as oral steroid if available. Then call your doctor. If you remain in the red zone after 15 minutes, repeat the rescue and call the ambulance. Continue repeating the rescue every 15 minutes until the paramedics arrive or you improve.

prise:

After determining your best PEFR, use the PEF meter every morning, and whenever you have any symptoms.

- c. The instrument needs to be cleaned, according to manufacturer's instructions, every now and then. Store away from dirt and dust.
- 7. Thank the patient and examiner.
- 8. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Metered-Dose Inhaler Use

Introduce yourself and establish good rapport (address the patient by name)

Explain the device's:

- Name: Metered Dose Inhaler (MDI)
- Purpose: either used as a symptom reliever "quick acting medication that opens the airways and resolves your symptoms during an attack" or as a preventer "slow acting medication that prevents the symptoms from occurring in the first place". If both types of Inhalers are prescribed, advise the patient to use the symptom-reliever first.
- Show the patient the Inhaler and explain its parts (cap, mouth-piece, plastic holder, canister, with or without spacer). Emphasize on the need to revise the expiry date, and double-check that the Inhaler is not empty prior to use

Explain the steps of use - "It is very important to use your Inhaler correctly so that the medication in the spray reaches deep into your lungs to treat our asthma":

- Sit upright or stand up for better medication delivery
- Remove the cap and check correct positioning (canister up/L-shape)
- Shake the inhaler for 1-2 seconds
- Breath out slowly and gently through your mouth
- Put the mouth piece into your mouth, and seal tightly with your lips
- Tilt your head back slightly with your chin up
- Start to breathe in slowly through your mouth while pressing the puffer firmly as you do so. Continue breathing in from your mouth as far as you can for 3-5 seconds.
- When you cannot breath in any more take the Inhaler out of your mouth and hold breath for 10 seconds, then breathe out gently
- In case your dose is more than 1 puff; repeat steps c-h after 1 minute
- Re-cap the inhaler, wash your mouth if steroid inhaler used
- Let him or her do it and observe to correct

Advise the patient about taking care of the MDI:

- Wash the cap twice a week
- Ensure that you always have the reliever around in case you need it

Introduce the patient to spacers and their benefits - "Many people who have

trouble using inhalers do better when using a special device called a spacer. It is very efficient and cause less irritation of the mouth and throat".

- a. Indications: children < 5 yrs, elderly, or patients who have difficulty coordinating
- b. Show the patient the instrument and explain its parts: (inhaler entry port, body, valve, mouthpiece mask, cap)
- c. Method of use: repeat the instructions above (steps a- f) then advise the patient to:
 - Press on the canister once to deliver one puff into the spacer.
 - Take 4 normal-sized breaths in and out from the mouthpiece.
 - Repeat the above for the number of puffs needed
- d. Advise the patient about taking care of the spacer:
 - Prime the spacer by pushing one puff in before first use
 - Clean by rinsing it with water only once a week. Do not use soap and do not attempt rubbing the spacer from inside. Allow the device to dry overnight.
 - Replace the spacer every 6 months

6. Encourage any questions

7. Ensure:

- a. Positive reinforcement - "Many others use it, you can definitely use it correctly" - "We are always available to support you"
- b. Patient understands the doses (reliever: 1-2 puffs every 3-4 hours)
- c. Patient understands side effects of SABA: palpitations, tremors
- d. Arranging a follow up
- e. Give away reading material if available

8. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Use of Performance Enhancers

Areas to focus on: For athletes, striving towards success in sports is an attempt to be admired, get their country a medal, or get in a professional team. This causes them to lose sight of what is fair or right, and they might use some performance-enhancing substances, as a substitute or adjunct to hard work, regardless of their serious medical complications.

1. Introduce yourself and establish good rapport (show empathy, and avoid arguing)
2. Ask:
 - a. Ideas, Concerns and Expectation (ICE)
 - b. Use of performance enhancers: age at onset/duration, type's, route (oral, intranasal, inhalational, trans-buccal, creams/gels, implants, injections), amount, and any previous attempts to quit.
 - c. Explore motives for use: competition season (use peaks: early preseason, during season), previous sports injury (use increase after an injury), or desired body image, performance, "What do you want to be?" "You want to be bigger? Leaner? Have more overall endurance?"
 - d. Unusual symptoms (sudden onset unexplained): sleeping problems, mood/ energy/weight changes, or physical symptoms (ache, palpitations).
 - e. Past medical history: Diabetes mellitus (DM), Hypertension (HTN), Coronary Artery Disease (CAD), renal or liver disease (some supplements causes water retention, increase insulin resistance, or exacerbate renal or hepatic failure)
 - f. Alcohol or drugs use
 - g. Background knowledge about their benefits, harms and benefits of quitting.
3. Advise: Develop discrepancies between what the athlete wants to after sports (example: want to have kids) and the impact of continued use of the substance:
 - a. "As your doctor, I think it is very important for you to be fully informed. It is common for athletes to take substances, including prescription medication in high doses, specifically for the purpose of improving their sports performance (increase their strength, power, speed, endurance [toleration], pain threshold) or to alter their body weight/composition."

b. "This practice of sport doping is banned by most professional sport's associations not only because it is cheating but because of the risks to the athlete him/herself. Unfortunately, most of these risks are based on theoretical medical knowledge or reports from users' doctors, which is all we have. This is because it is difficult to confirm them, as it would be unethical to give such high doses to participants in research. The bottom line is that the short-term benefits of these performance enhancers are tempered by many risks. The good news, however, is that most of these side effects are reversible upon discontinuation".

c. Briefly discuss the supplement used (be aware that they are often combined). Pull out the official website of the specific trade-name used and use it while talking the patient through the following:

- **Nutritional supplements (allowed):** Few studies prove performance enhancement with the following (in small doses):
 - Carbohydrate- electrolyte beverages
 - Sodium bicarbonate
 - Creatine (most popular): A compound that is naturally produced by the body in small amounts (2mg) to help muscles release energy. Studies demonstrate: increase maximum power output, increase lean body mass, increase endurance.
Side effects: increase weight, acute interstitial nephritis, and rapid progression of Chronic Kidney Disease (CKD). Ineffective or lack evidence of performance enhancement noted with
 - Amino acids (Side effects: diarrhea and stomach cramps)
 - Beta-hydroxy-beta-methylbutyrate
 - Chromium (Side effects: rhabdomyolysis, liver and renal dysfunction)
 - Iron
- **Growth Hormone (GH)**
 - The only difference between human-derived or animal-derived GH is that the latter has the potential to cause allergic reactions (due to antigenicity), but they both contain the same compound.
 - Limited studies demonstrate: increase lean body

mass, but it does not improve strength and may actually worsen exercise capacity.

- Side effects: diabetes, myopathy, cardiomegaly, hepatitis increase lactate levels, promote epiphyseal closure, fluid retention (soft tissue edema), hypertension, joint pain, carpal tunnel syndrome)
- * Androgens and Anabolic steroids.
 - Include: exogenous testosterone, synthetic androgens (example: danazol, nandrolone, stanozolol), androgen precursors (example: androstenedione, dehydroepiandrosterone), selective androgen receptor modulators, and other forms of androgen stimulation.
 - All increase the testosterone effects which are:
 - Anabolic (increase muscle protein synthesis, promote muscle building, and provide quicker recovery from hard work)
 - Androgenic (male characteristics: as facial hair, deeper voice).
 - Studies demonstrate: testosterone causes dose-response increase in muscle strength and mass (not true for androgen precursors).
 - Side effects: tendon rupture, hepatotoxicity, administration related infections (abscesses, septic arthritis, and hepatitis/HIV), androgenic effects reduce spermatogenesis/fertility, gynecomastia, acne, hirsutism, temporal hair recession, premature closure of epiphysis), cardiovascular system (CVS) effects (reduce HDL, increase LDL, erythrocytosis), and Central Nervous System (CNS) dysfunction (depression, mania, psychosis, aggression)
- * Stimulants.
 - Include: amphetamine, D-methamphetamine, methylphenidate, ephedrine, pseudoephedrine, caffeine (not banned), dimethylamylamine, cocaine, fenfluramine, pemoline, selegiline, sibutramine, strychnine, and modafinil.
 - Studies demonstrate: increase endurance, reaction time, and anaerobic performance.

reduce weight and tiredness.

- Side effects: rhabdomyolysis, autonomic effects (weight loss, headache, nausea, tremor), dysfunction (hypertension, tachycardia, myocardial infarction, stroke, heat stroke), CNS dysfunction (increase risk 2 to 3 folds including insomnia, anxiety, panic attacks, agitation, aggression, and psychosis)

- * **Oxygen transport Improvers**

- Include: blood transfusions, erythropoiesis-stimulating agents (as recombinant human erythropoietin and darbepoetin alfa), hypoximetics that stimulate endogenous erythropoietin production (such as desferrioxamine, cobalt, and artificial oxygen carriers).
- Transfusions and erythropoiesis-stimulating agents have been shown to increase aerobic power and physical exercise tolerance. However, the ergogenic effects of the other agents are debatable.
- Side effects: Myocardial infarction (MI), stroke, Deep Vein Thrombosis (DVT)/ pulmonary embolism, hypertension, antibody-mediated anemia
- Others: Beta agonist and Diuretics

4. Assess:

- a. Motivation and willingness to quit (precontemplation, contemplation, preparation, action, maintenance)
- b. Impeders for successful quitting : as peer pressure "Is there anyone that you are worried to tell that you are quitting?"

5. Assist: "Lets share a plan which is suitable for you to quit supplements"

- a. Set a quit date
- b. Address psychosocial fears, family and friends support.
- c. Use alternatives:
 - "Get involved in regular sports to increase your fitness"
 - "Maintain a balanced diet to maintain a blood chemistry necessary to perform at an elite level"
 - "Have a pre-exercise meal to ensure that adequate glycogen stores are available for optimal performance"
 - "Have a post-exercise meal to enhance recovery and

- Improve your ability to train consistently
- Replace fluid loss by water
- Take 4:1 gram carbohydrates (such as fruit juice) to protein ratio. CHO restore your glycogen stores, and proteins will rebuild muscle tissue that is damaged during intense or prolonged exercise

Change:

- a. Positive reinforcement "Many others did it before you, you can definitely do it, we are always available to support you" "World class athletes who have the same body as yours have won champions without enhancers, you can as well"
- b. Follow up soon
- c. Referral to sport medicine or sports psychologist clinic as needed
- d. Referral to drug dependency unit if physical dependence is present
- e. Brief assessment of underlying conditions and age appropriate screening
- f. Give away reading material if available

Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Request for Human Papilloma Virus Vaccine

1. Introduce yourself and establish good rapport.
2. Ask:
 - a. Mother's, patient's Ideas, Concerns and Expectations (ICE): about the vaccine and cervical cancer as a condition
 - b. General health: any chronic disease, acute illness, allergic reaction to vaccines
3. Advise, Assess: knowledge and willingness to take the vaccine
 - a. "Human papilloma virus (HPV) is a sexually transmitted infection that affects both genders. It has different types and a person can be infected with more than 1 type at a time. It is usually asymptomatic. A patient can have it and can transmit it sexually without knowing. Fortunately, in 90 % of cases, the affected body washes out the virus and the person gets immune. However, if it did not clear from the body, it can cause genital warts or cervical cancer, which is again asymptomatic unless advanced (this is where screening maybe important)."
 - b. "HPV vaccines are of 2 types, both consist of 3 doses (0-2 months months). They protect against (not treat) genital warts and cervical cancers. They are recommended for both genders (only Gardasil: quadrivalent type can be given to males) starting from 11 years, up to 18 years of age. They are not currently recommended for patients more than 26 years of age because clinical trials have showed that they offer limited or no protection against HPV related diseases in this age group."
 - c. "It is important to continue cervical cancer screening even after taking the full vaccine series because it does not protect against all types of HPV and HPV virus is not responsible for 100% of cervical cancer cases".
 - d. "It is a safe vaccine that gives long life immunity. Lactating mothers but not those who are pregnant at time of visit can take it. Side effects are mild including mild fever, soreness or redness at the injection site."
4. Assist: "Let's share a plan which is suitable for you"
 - a. Check patient understanding
 - b. Offer written information or give away material if available

Arrange:

- a. Follow up in 2 months for second dose.
- b. Anticipate complications: "you may experience headache, get redness, swelling or pain on the site of the injection."

Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

1 2
3 4
5 6
7 8

pregnant not given

Domestic Violence

1. Introduce yourself and establish good rapport
2. Explore the reason for attendance and patient's Ideas, Concerns and Expectations (ICE)
3. Before raising the issue: Be non judgmental + assure patient about privacy
 "Nobody deserves to be hurt by someone else. Anything you tell me will be confidential, and I will not do anything about what you tell me unless you want me to." *
4. Use open-ended questions: "Tell me about things at home" "How do you feel about your home life?" "Do you feel scared or safe at home?" "I am worried someone may have hurt you". *
5. Identify and assess history of violence:
 - a. Current violence: "I have noticed that some of your injuries seem like they have come from someone being rough with you. Has anyone been rough with you?" "Have you been hit, kicked, punched, or otherwise hurt by someone within the past year? If so, by whom?" "Do you feel safe in your current relationship?"
 - b. History of violence
 - c. General signs, symptoms of distress (fatigue, headache, Gastrointestinal or cardiac symptoms)
 - d. Specific signs, symptoms of violence (fracture, burn, bruises...)
6. Social and family history:
 - a. Family dynamics: relationship with husband and children
 - b. Living situation: who does the patient live with?
 - c. Enquire: "We do have to ask you some very personal and painful questions about what happened. I know it will be hard to answer some of these questions, but we are asking them so that we can take care of you to the best of our abilities" *:
 - Physical abuse: "Is there anyone at home who is hurting you?" *
 - Psychological abuse: "Does he or she belittle you or try to control you?" *
 - Sexual abuse: "Did someone do something to you that you did not want done?" *

- Economical abuse: "Do you feel lonely". "Do you have a lot of arguments with the people you live with?"
- Frequency of abuse, when does it occur, are alcohol or drugs involved
- How has he or she been coping? "Are there any children or vulnerable adults involved?"

7. Screen for depression and risk of suicide: Has it affected his or her mood? Has she or he ever considered harming self or taking own life?

8. Management: Be non-judgmental, establish the patients concerns, allow him or her to control the situation and make decisions. If patient denies suspected abuse do not confront or challenge the patient, but express concern. Acknowledge and assure: "It's a very complex situation that must have been difficult for you to disclose" *:

9. Offer SOS-DoC Intervention

- S: offer Support and assess Safety
 - Support: "I'm sorry this has happened. You have the right to be safe and respected. The violence is not your fault and no one deserves to be treated that way." "I can not even imagine what you have gone through. We are going to do everything that needs to be done to help you" *. Establish support if they have any friends or family that know or could support them
 - Safety: identify risk markers such as young age, unemployment, prior history of being abusive, alcohol or drugs abuse, depression, low income, and low academic achievement.
- O: discuss options, including safety planning and follow-up.
 - Legal tools: provide information, give handouts and offer referral to: police for restraining orders, mandatory arrest or local domestic abuse services.
 - Counseling social support services: explain, give handouts and offer referral to: national domestic violence helpline, or Women's aid (note that if the victim is an adult with capacity, you can only refer them if they consent (unless a child or vulnerable adult is involved))
 - Promote safety planning: Provide information, give handouts and arrange for refuge if they cannot go home: "If you decided to leave, where could you go?"

"Can you keep clothes, money, and copies of keys and important papers in a safe place?" "Where could you go in an emergency?" "How would you get there?" (Rotte & Lopez, 2012)

- S: Identify and validate patient's strengths: "I can see that you care deeply about your children. It took courage for you to talk with me today about the violence." (Rotte & Lopez, 2012)
- Do: document observations, assessment, and plans.
 - Record what the patient said. Use quotation marks to document exact words.
 - Objective observations: describe the injuries you observed use drawings and photographs: "we need to perform a physical exam and collect samples from your body. This is important because they can be used as evidence against whoever did this to you". (Rotte & Lopez, 2012)
- C: offer continuity through follow-up appointment. Encourage the patient to talk about it and seek help. Remind the patient that he/she can come to see you anytime, and assess barriers to access (example: transportation?): "It is completely up to you if you want to get some help. But if you change your mind we are always here for you" (Rotte & Lopez, 2012)

10. Provide patient with contact number of social support programs if available

11. Thank the patient

12. Communication skills: ensure organized approach, mixed questioning (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Family Planning and Contraception

Introduce yourself and establish good rapport

Ideas, Concerns and Expectation (ICE) + understanding of contraception

Ask:

- a. Age, parity, current lactation?
- b. Menstrual History: Last Menstrual Period (LMP), regularity, heaviness, duration
- c. Previous experience: any problem? compliance?
- d. Personal preference, acceptability of contraception, cost, ethical considerations, does the partner agree?
- e. Any contraindication to contraception: multiple sexual partners (risk of Sexually Transmitted Disease (STD), Pelvic Inflammatory Disease (PID)), smoking, personal, family history of Deep Vein Thrombosis (DVT), Ischemic Heart Disease (IHD), liver disease, or cancers (ovarian, breast, endometrial)
- f. Other past medical problems, medications: Diabetes Mellitus (DM), Hypertension (HTN), Tuberculosis (TB), epilepsy
- g. Any allergies (latex, copper)

Advise: Explain to the patient choices, types of contraception methods, effectiveness of each, advantages, disadvantage, and instructions for use: "The total risks of birth control are much less than the total risks of a pregnancy!"

a. Hormonal.

- a.1. Combined contraception: "As the name suggests, the combination pill is a combination of two female sex hormones that prevents pregnancy by changing the hormone balance in your body to stop ovulation."

There are different types:

- 21-days packet or biphasic pills: "Start the pill on the 5th day of bleeding and take at the same time of each day thereafter for maximum prevention".
- 28-day packets: monophasic, triphasic pills: (the 7 extra pills are inactive, sugar pills) "Start the pill on the 1st day of bleeding and take at the same time of each day thereafter for maximum prevention".

- Effectiveness: at least 99% starting 7 days after the first pill
- Advantages: reduce period's pain, flow, risk of uterine, ovarian cancer, risk of ectopic pregnancy and increase bone density
- Side effects: "If any it will wear within 3 months": nausea, spotting, mild headache, tender breasts, dizziness or slight weight gain, loss"

Interactions: Oral Contraceptives Pills (OCPs) effectiveness decreases when used along with antibiotics, vitamin C, anti-epileptics or anti-TB medications: "when taking any use another method of contraception during the course and up to 7 days after the last dose" OCPs decrease the effectiveness of hypoglycemic agents

- Missed pills:
 - Within 12 hours of schedule take it and continue as usual
 - More than 12 hours from scheduled dose: wait until the time of the next pill to take it and use another contraception method for 7 days.
 - More than or equal to 2 pills missed: start a new pack without waiting for your previous pill-free days if applicable and use another contraception method for 7 days.
 - If the missed pills were in the first 1 to 7 days, consider emergency contraception. If the missed pills were in the day 15-21, omit the pill-free interval by finishing the current packet and continue with the new packet.
- Contraindications: HTN, pregnancy, breast feeding, smoker, more than 35

years, DVT, liver/gallbladder disease, migraine, TB, fungal infection, epilepsy

- Address any myths: "There is no reason to take a break from the pill unless pregnancy is wanted". "You can get pregnant anytime once you stop the contraceptive pills".

a.2. Progesterone only pill (28 days packet)

- "Start the pill on the first day of bleeding and take it at the same time of each day thereafter for maximum prevention".
- Indications: lactating ladies, more than 40 years, history of estrogen secreting tumor
- Missed pills: taking it within 3 hours of usual time would not affect the effectiveness. If these 3 hours passed the chance of getting pregnant is higher.

a.3. Depo-Provera Injections (Medroxyprogesterone based inhibits ovulation)

- Effectiveness: 99.7%
- Intramuscular (IM) injection in the deltoid, thigh, gluteus, in the first 5 days of bleeding or less than or equal 21 days of giving birth. This gives immediate effectiveness that continues for 3 months. If given at other days of the cycle then backup protection is needed for 7 days.
- Advantages: Good for ladies with compliance issue, less expensive than pills, no Pelvic Inflammatory Disease (PID) risk, decrease dysmenorrhea
- Side effects: irregular menses, no periods, headaches, depression, weight gain (2-3 Kg per year), decrease High Density Lipoprotein (HDL), loss of bone mineral density (if used > 2 years), acne, hirsutism, alopecia
- Contraindications: as with OCPs, drug addiction, seizure

Correct any myths: "You could become pregnant as soon as 3-4 months after the last shot. But some women take up 1 to 2 years to conceive after stopping this method."

a.4. Implants

- Subcutaneous (SC) implantation of a rods containing levonorgestrel/etonorgestrel (progesterone) in the skin covering the deltoid muscle, which last for 3 years.
- Effectiveness: 99.95%
- Ovulation restarts 6 weeks after removal of the implant.
- Side effects: bad scars, very difficult to remove (may migrate and need to be located by Magnetic Resonance Imaging (MRI), high frequency Ultrasound (US))
- Same mechanism of action, efficacy, and contraindications as Depo Injections.

a.5. Vaginal Nuva ring: A flexible, transparent plastic ring that is self-inserted deep into the vagina after menses and left for 3 weeks. Removed at the 4th week to allow menstruation to occur.

- Mechanism of action: as OCPs
- Effectiveness: 95% at 7 days from starting use of the ring
- Side effects: as with OCPs and vaginitis
- Contraindications: as in OCPs, repeated fall after insertion and prolapse

a.6 Emergency contraception, Plan B

- Effectiveness: 88% if within 72 hours of unprotected intercourse, and 95% if within 24 hours
- Based on levonorgestrel (2 tablets of 0.75 mg, to be taken 12 hours apart)
- Side effects: mild nausea, spotting, or bleeding
- Correct any myths: Prevents ovulation. Does not cause abortion. Not for regular use.

a.7. Intrauterine device (IUD):

- "Small T-shaped device that is inserted and kept in the uterus to prevent implantation of any embryo. The hormonal types also prevent ovulation. A small connected thread is left in the cervix for easy removal when desired"
- Two types: Copper coils (works for 10 years), and hormonal intrauterine systems (Mirena: works for

- c. 5 years}
- c. Effectiveness: 99.2 to 99.9%
- d. Suitable candidates: women who are contraindicated or intolerant to OCPs, smokers and more than 35 years of age
- e. Advantages: easy office based insertion, good for ladies with compliance issue, reversible, decreased heavy bleeding (only Mirena)
- f. Side effects: PID, ectopic pregnancy, breast tenderness, spotting (for copper + first three months in Mirena), nausea, or headache
- g. Contraindications: pelvic inflammatory disease, multiple sexual partners, copper allergy or Wilson's disease (for copper IUD only)
- h. Correct any myths: "Does not interfere with sex or daily activities." "Uterine perforation is uncommon (0.1 - 0.3% risk)"

b. Barrier methods

- b.1. Male Condoms: Thin sheath of rubber, latex, that should be worn over an erected penis.
 - Effectiveness: 79-97%
 - Advantages: Cheap, readily available, provides the best protection against STD's especially the latex and polyurethane type.
 - Side effects: Risk of condoms breaking down with oil based lubricant.
- b.2. Female Condoms
 - A thin plastic pouch that lines the vagina. It is held in place by close inner ring at the cervix and an outer ring at the vagina.
 - Effectiveness: 79-97%
 - It should be placed prior to and kept in for 6-8 hours after the intercourse
 - Side effects: Expensive, No protection against STD's
- b.3. Diaphragm
 - A small dome shape device of latex or silicone that fits inside the vagina and covers the cervix. Should be kept in for 6-8 hours postcoitally.
 - Effectiveness: 84 - 94%
 - Advantages: Can be fitted 2-4 hours before

- Intercourse with the ability to increase the period by reapplying spermicide
- Side effects: Allergy, Urinary Tract Infection (UTI), toxic shock syndrome if left more than 24hrs.

b.4. Cervical cap

- Small plastic dome placed over the cervix and used with spermicide.
- Effectiveness: In nulliparous 80-90%, In multiparous 60-70%
- Advantages: Can be fitted 6 hours before intercourse
- Side effects: Risk of UTI and toxic shock syndrome should be kept in for 6-8 hours postcoitally.

b.5. Sponge

- Doughnut-shaped device made of soft-coated foam with spermicide.
- Effectiveness: 84%
- Advantages: each sponge allows repeated acts for 24 hours period
- Side effects: risk of toxic shock syndrome, allergy and vaginal irritation.

b.6. Spermicides

- Types: Foam, crème, jelly or suppository
- Method of use: Inserted into vagina near the cervix no more than 30mins before having sex
- Effectiveness: 71 - 85%
- Advantages: Cheap and readily available
- Side effects: allergy, vaginitis

c. Natural methods: Absenteeism during peri-ovulation period, or withdrawal method (effectiveness: 80-99%)

d. Permanent sterilization:

d.1. Vasectomy for males

- Done through a small incision at the base of the scrotum. There are different techniques to do the one with the lowest failure rate is cauterization of the vasa with or without fascial interposition.
- Effectiveness: 99.85%
- Advantages: Safer and quicker than tubal ligation
- Disadvantage: expensive, surgical risks, takes time to be effective (confirmed by postvasectomy)

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- semen sample at 12 weeks showing rare, nonmotile sperms if any).
- Reversal: expensive and success rate is highly variable.
- Correct any myths: does not increase the risk of prostate, testicular cancer
- d.2. Tubal ligation for females
 - Advantages: decrease risk of PID and ovarian cancer
 - Disadvantage: expensive, surgical risks, risk of ectopic pregnancy
 - Effectiveness: 99.5%
 - Reversal: not evidence based, rarely successful

Assess: compliance of the patient, level of understanding, any questions or extra clarification needed.

Assist:

- a. Positive reinforcement a "Many others did it before you, you can definitely do it, we are always available to support you"
- b. Reached to shared understanding and management

Arrange:

- a. Negotiate appropriate contraception
- b. Explain red flags (unexplained fever, abnormal vaginal discharge with foul smelling, dyspareunia, or pelvic pain).
- c. Follow up as required
- d. Brief assessment of underlying conditions and age appropriate screening: vaccination, Pap smear, and mammogram.

Give away reading material if available

Thank the patient

Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Natural Family Planning

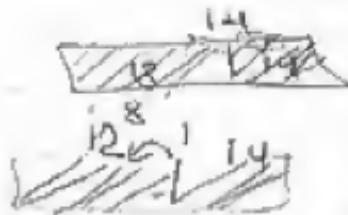
1. Introduce yourself and establish good rapport
2. Ask:
 - a. Ideas, Concerns and Expectations (ICE): Why this method? Any medical reasons? Currently breastfeeding?
 - b. Menstrual cycle: regular? Length of cycle, menses?
 - c. Explore patient's knowledge: "What do you know about the fertile days?"
3. Advise: "Natural contraceptive methods, as the name implies, use natural ways to prevent pregnancy. They are based on:
 - a. Periodic avoidance of unprotected intercourse during the fertile days. Effectiveness hugely depends on correct use by couples and accurate identification of fertile days. The chances of pregnancy go down to 1-9% only if couples follow the method correctly. To correctly identify your fertile period, methods are:
 - Cervical mucus method: Once the cervical mucus (copious, whitish, stretchy discharge) appears, avoid sex for 3 days after.
 - Basal body temperature: monitor the temperature every morning waiting for a slight rise (about 0.4 Fahrenheit) that occurs after ovulation. Avoid sex once it goes up for 3 days after.
 - Counting method: avoid sex from day 8 to 19 of the cycle for women with cycle's length of 26 to 32 days.
 - LH surge detection using home urine-ovulation test kit: this hormone signals ovulation. If your normal cycle is 28 days, you'll need to test on day 11-14 of cycle. A positive result means you should ovulate in the next 24 to 36 hours and you have to start avoiding sex for 3 days.
 - b. Lactation gives maximum protection in the first 6 months as long as the cycle has not resumed yet and no bottle feeds or supplements are introduced.
4. Assess: Couple's ability to follow these advices, any barriers
5. Assist:
 - a. Set the plan after identifying the fertility days.

b. Discuss the emergency contraception in case of having unprotected sex during fertility period. These are:

- Plan B: 2 doses of 0.75mg levonorgestrel, 12hrs apart within 3 days
- Copper Intrauterine Device (IUD): within 5 days

Arrange: For folic acid supplementation as failure rate is non-reliable.

Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.



Advising a Lady in Early Pregnancy

1. Introduce yourself and establish good rapport: "congratulations on becoming an expectant parent, this is a very exciting time in your life, even though you may be inclined to feel flat and sick at first" (Rotte & Lopez, 2012).
2. Ask:
 - a. Ideas, Concerns and Expectations (ICE)
 - b. Past medical history: any medications? Blood group?
 - c. Gynecological and obstetric history: Last Menstrual Period (LMP) Regular? Early scans? . Aim for correct dating
 - d. Family (genetic diseases) and social (support, help) histories
3. Advise: "Your baby is very special and deserves a flying start in life by growing healthily in your womb. As your doctor, I think it's very important for you to understand that the first 12 weeks of pregnancy are the time of organ formations, therefore some points have to be taken into consideration."
 - a. Nutrition: "Aim for well-balanced and nutritionally sound diet".
 - b. Folic acid supplements 0.4 mg (as early as possible; preferably 3 months preconception). If family, personal histories of neural tube defects, epileptic or diabetic use 5mg daily. Explain to the patient "It reduces the risk of having a baby with neural tube defects - e.g. as spina bifida"
 - c. Maternal multivitamins, vitamin D, calcium supplements, iron supplements
 - d. Limit caffeine consumption to 150- 300 mg per day
 - e. Avoid unpasteurized dietary products and raw eggs, meat and fish
 - f. Have moderate amount of liver, avoid shark, swordfish, king mackerel, tilefish, tuna steaks, and saccharin-containing drinks
 - g. Avoid smoking, alcohol and illicit drugs (no known safe amount of alcohol consumption during pregnancy)
 - h. Air travel: safe until 4 weeks before the Expected Date of Delivery (EDD) (hydration, stockings and mobilization) long flights avoided in first and third trimesters.
 - i. Moderate non-contact exercise: more than 150 minutes per week days of week (avoid activities with risk for falls, e.g. climbing and avoid Scuba diving)
 - j. Sexual intercourse: not associated with adverse effects
 - k. Hair treatment and dyes: avoid in early pregnancy

*↓
counsel in 1st trimester*

- 1. **Smoking with fetal complications**
can help and causes birth to first trimester (associated with neural tube defects and miscarriage).
- 2. **Medications** used for preterm complications and heart conditions (hypertension, depression, diabetes, hypertension and hypertension characteristics and genetics) is not associated with effects (hypertension, depression, preterm prolonged bleeding and increase in certain chemicals).
- 3. **Car seat belts**: Proper use (low for strap goes below neck in the belly) and risks related to not using them.
- 4. **Exercise planning** should focus (what to do when they menstruate, natural what to expect when later pregnant, strategies to manage pain, and the value of (low impact) and backstreching (the best stretching method).

Next: "What did you think about that?"

- 5. **Exercise and drug (teratotic, substances use or bleeding)**
Depression related to unwanted pregnancy, low self-esteem, state, Anger, and domestic violence.

Then share a plan which is possible for helping you to have this "be a nice experience".

Vaccination for influenza (trivalent vaccine, killed who safe in pregnancy).

Screen for: Reproductive, behavioral and sexually transmitted infections, diabetes, ABO and Rh blood typing and anatomy screen (risk of preterm birth, intrauterine growth restriction, and perinatal depression).

T at risk of preterm birth, low dose aspirin (aspirin and calcium supplementation if dietary intake is low).

Screen for anemia and reveal tube activity (choose the right treatment).

Give instructions to take antibiotics if any and manage smoking (if any).

Reinforcement: "Pregnancy is a very normal event in the life of usually gives very healthy, normally if you have regular care".

Final choice: "Dental therapist will provide you an estimate

exercises, back care, postural advice, relaxation skills, pain relief in labor, general exercises, post-delivery care, and breast feeding" (Rotte & Lopez, 2012)

- c. Follow up: every 4-6 weeks until 28 weeks of pregnancy, then every 2 weeks until 36 weeks of pregnancy, then weekly until delivery.
- d. Safety netting and red flags "If you develop lower back/abdominal pain, vaginal bleeding, vaginal water gush, or notice a decrease in your baby movements please come back immediately"
- e. Age appropriate screening (pap smear if not done) and give away reading materials

7. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Epilepsy in Pregnancy

1. Introduce yourself and establish good rapport
2. Ask
 - a. Age, work, Last Menstrual Period (LMP), gestational age
 - b. History of epilepsy: medications used, level of control before pregnancy, any previous pregnancies with the epilepsy and their outcomes, previous investigations and their results (MRI, CT, EEG), previous follow up with neurology.
 - c. Enquire about current, new onset seizures (first attack after 20 weeks of gestation think of eclampsia): How many attacks? Any seizure medications (name, doses and frequency)? Any other medication (may have interaction)?
 - d. Other medical conditions
 - e. Ideas, Concerns and Expectations (ICE): patient worried about teratogenicity
3. Advise "To make sure that we are on the same page, tell me what do you know about epilepsy"
 - a. What is epilepsy? The commonest neurological disorder in pregnancy characterized by recurring seizures.
 - b. What is the risk of having a child with epilepsy? If only the mother is epileptic risk is less than 5%. If both parents are epileptic risk is a bit higher. (Inheritance is autosomal dominant).
 - c. What to do when a seizure occurs during pregnancy? Tell your family, friends: In case of a seizure simply remove potentially harmful objects away. Do not restrain, cover with a blanket, alert the patient (if absence type of seizure), place anything in mouth, or attempt to move to other place. If the attack continuous or the patient does not regain consciousness after 20-minutes: Call the ambulance, and administer rectal valium (keep at home).
 - d. How to decrease the harm to the fetus?
 - e. Wear a bracelet, necklace, card that specifies your condition and the details of your medications, your GP and hospital phone number
 - f. Advise about the medications:
 - * The harm from seizures and resultant hypoxia on the fetus is higher than the side effects of the medications, so better to attain best control with least medications.
 - * All anti-epileptic drugs are probably teratogenic.

Monotherapy is preferred as polytherapy is associated with a greater risk of teratogenicity. If the patient was well controlled (seizure-free) in the pre-pregnancy period, the same medication should be continued. If not, then it is best to shift from highly teratogenic (highest risk with valproic acid, phenobarbital) to less teratogenic medications (lowest with levetiracetam and keppra). Children of mothers with epilepsy have 4 to 8% risk of congenital anomalies.

- “Don’t stop your medications suddenly or change the dose by yourself. Continue monitoring blood level in each trimester when the body’s interaction with the drug changes.

- Take folic acid 4 mg daily (to prevent neural tube defects)
- Avoid precipitating factors: Sleep deprivation, extreme hunger, fatigue, constipation, or flickering lights (view smart screens from at least 2 mm distance in an illuminated room, if nearer cover one eye with palm of hand and use polaroid sunglasses)
- Avoid being alone in potentially dangerous places (kitchen, bathroom, near fire/drains) and avoid door locking
- Activities and sport: “you better get engaged in supervised activities only” and avoid activities that may trigger or cause injury
- Driving (According to local driving regulations in different countries and the type of vehicle used, ranges from 1 to 10 years from being seizure free)
- Some anticonvulsants increase the risk of hemorrhagic disease, patient’s newborns need to be given prophylaxis vitamin K

4. Assess: Level of understanding, ability to adhere to medications and attendance to follow up visits

5. Assist:

- Suggest meetings with a close relatives for continuous support
- Invite to attend help group associations and foundations
- Postnatally: Counsel regarding breast feeding and medications (Caution if the mother is using phenobarbital, primidone, ethosuximide or lamotrigine), safety of the baby (e.g. change diaper on the floor), and family planning (progesterone injectable and IUD does not interact with antiepileptic drugs. Antiepileptics reduce the effect of Oral Contraceptives Pills (OCPs), you might need dual contraceptive methods)

6. Arrange: "Many mother did it before you, you can definitely do it, and we are always available to support you".
 - a. Follow up shared with obstetrics medicine clinic (blood levels in each trimester, scans, neurologist meeting and discussion)
 - b. Anticipate complications (Safety netting): contact your doctor if:
 - * Seizure change in number
 - * Any time you change your medication or take another medication
 - * If you sustain a trauma to the tummy or have abdominal pain (? Abruptio)
 - c. Brief assessment of underlying conditions and age appropriate screening
 - d. Give away reading material if available
7. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Pregnancy & Risk of Down syndrome

annual screening
thyroid, hearing
ostholme
CBC

1. Introduce yourself and establish good rapport
2. Ask:
 - a. History: patient's age, gestational age, prenatal follow up, any down syndrome's screening test performed during this pregnancy, past obstetric history (any previous child with down syndrome).
 - b. Ideas, Concerns and Expectations (ICE), example: pregnant lady who found out one of her cousins had a baby with Down syndrome and she is worried that she might have a similar baby.
 - c. Patient's knowledge: "What do you know about Down syndrome?" "Has she heard about screening or diagnostic test for down syndrome?" "Does she expect specific test?"
3. Advise:
 - a. "Being your doctor, I think you should understand that if your cousin had a child with Down syndrome that does not mean that you will have a Down syndrome baby too".
 - b. "Just so that we become in the same page, can you tell me what do you know about Down syndrome?", Explain:
 - Down syndrome is a genetically determined (an extra copy of chromosome 21 resulting from a new mutation or acquired from a carrier, affected parent (those with silent translocation or mosaic Down)), lifelong condition that presents from birth in the form of learning or behavioral problems (varying from mild to severe. The child can take longer to learn how to sit, walk, and talk) as well as other medical problems (Obstructive sleep apnea (OSA), stomach, blood, and heart problems).
 - Features of down syndrome: flat face, depressed nasal bridge, extra skin at the back of the neck, eyes that slant up, floppy muscles, single palmar crease.
 - Causes are unknown, and there is no known risk factors increases a pregnancy risk. Even healthy young women can have a baby with Down syndrome. It occurs in 1:700 births, and its chances gets higher as women gets older.
 - Early detection and the latest advancement in medicine increased their life expectancy from 25 year in 1980s to 49 years in 1997. By allowing early treatment of any

complications (like heart conditions), many people with Down syndrome live happy and full lives. But they usually need help with some day-to-day tasks.

4. **Assets:** Understanding and exclude red flags: thoughts of aborting herself

5. **Assist:** "Let's share a plan which is suitable for helping you"

- Explore: "Some mothers like to know everything about her expected child before he or she is born in order to be relieved from any anxiety/prepared for a special child, others choose to wait until the child is born. Which type describes you best?
- It is important that you understand that there are multiple ways to know if your current fetus has Down syndrome:
 - Screening can be done in women who are less than 20 weeks pregnant by: triple screen blood tests (alpha-fetoprotein, hCG, Estriol) and, or ultrasound. These can tell if you have a low or high risk. If the latter is the case a confirmatory test is needed.
 - 2 confirmatory tests available, used depending on the gestational age:
 - Chorionic villus sampling (CVS) if 11-14 weeks: during which a needle is put into the mother's uterus and removes a tiny piece of the placenta, the organ that delivers oxygen, nutrients and carries waste away from the fetus. Risk of miscarriage with the procedure is about 1/200.
 - Amniocentesis if 15-20 weeks: a needle is put into the mother's uterus and removes some of the fluid that is around the baby. Risk of miscarriage with the procedure is about 1/300 to 1/600.
- If you choose to have no testing in pregnancy and the baby turns out to have features of Down syndrome, a genetic testing after birth will be done to confirm the diagnosis.
- If the child turns to have Down syndrome, then regular follow up with screening for common problems:
 - Growth delay: at first visit, at 2, 4, 6, 12, 18, 24 months and annually thereafter.
 - Obstructive Sleep Apnea: start screening at first year of age and Sleep study by 4 years of age.
 - Ophthalmology review: At 5 months and annually until the

- age of 5 years. Every 2-year from 5-13 year. Every 3 years from 13-21 years.
- Hearing abnormalities: At birth, 6months, then annually
- Thyroid hormone: At birth, 6 months, 12 months, then annually.
- Heart defects: Ultrasound before and after baby born
- Blood disease: Blood test Complete Blood Count (CBC) every year from age 1-21 years
- Muscle and nerve problem, joint problem (atlantoaxial instability): Careful neurological exam annually

6. Arrange: Positive reinforcement, arrange follow up, give her the time to decide, give away reading material if available, and safety netting: if she did decide not to have a screening test then she become anxious and want to do a screening test to relieve her anxiety she shall come back.

Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

High Risk pregnancy

Identify yourself and establish good rapport (ensure patient feels comfortable, ask if she has a midwife with her?)

Ask:

- Current Obstetric history: any vaginal bleeding, fluid leakage, vaginal discharge (postponed planned), premature contractions (3 or more in 20 min), preterm-like symptoms (e.g. pains, headache, visual changes, right Upper Quadrant (RUQ) pain), fetal movement (minimum 12 per day), placenta previa, fetal abnormalities, multiple gestation, Intrauterine Growth Restriction (IUGR) or macrosomia and cervical incompetence.
- Past Obstetric history: previous delivery, group B strep infection (GBSI), Genital Herpes Simplex (GHS), ectopic, Intrauterine fetal death, fetal abnormalities, pre-eclampsia, Rh-incompatibility, previous caesarean section, live birth weight or macrosomia, uterine malformations (fibroids) or scarred uterus.
- Medical history: GBSI, Diabetes mellitus (DM), Hypertension (HTN), Thrombophilia (TH), heart disease, epilepsy, renal disease, current viral infection (chicken pox or mono-lymph), Sexually Transmitted Disease (STD), Human Immunodeficiency virus (HIV), rubella, Urinary Tract Infection (UTI) symptoms, blood glucose (less than 5 mmol/L)
- Surgical history (previous pelvic surgery, hysterectomy, marriage).
- Drug history and allergies

Actions: Assessing in the history

Actions: Understanding and exclude red flags

Action: "Let's share a plan which is suitable for helping you ..."

Actions:

- Check (expected) Date of Delivery (EDD) whether induction of birth date
- Examination:
 - General: weight, Blood Pressure (BP), leg oedema
 - Abdomen: fundal height, Head to side presentation, fundal circumference, fetal heart sound

- Cervical: dilation, effacement, fetal station, and cervical consistency. Speculum exam to rule out: rupture of membrane (ROM).
- c. Investigations: Hemoglobin level, urine test for albumin and glucose. Vaginal and urine culture for GBS (if positive give antibiotic at labor or after 12hrs of ROM). Ultrasound to check for fetal well being: movement, tone, heart sound. Check amniotic fluid index.

7. Arrange: arrange follow up, give her time to decide, give away reading material if available, and safety netting: ask the mother to monitor fetal movements.

Breast Feeding

1. Introduce yourself and establish good rapport
2. Ask:
 - a. Mother's inquiries: Ideas, concerns and expectations (ICE).
 - b. Current situation: Breast-feeding attempts or difficulties, working mother, anyone who helps her taking care of the child, social support, husband's attitude toward breast feeding and thoughts from others regarding breast feeding. Ask about contraception measurements.
 - c. Feeding history: type of feeding, onset, frequency, duration, method (Shifting breasts), ask if the child sleeps after feeds, passes stool and urine.
 - d. Mother's diet, calcium and vitamin d supplements, fluids intake and maternal medications.
3. Advise: "As your doctor, I encourage you to breast feed your baby as breastfeeding has multiple benefits for you and your baby"
 - a. Benefits of breast feeding for the mother and the baby:
 - Psychological bonding
 - Increases your baby's immunity
 - Decreases risk of developing dermatitis, asthma, Acute Otitis Media and gastroenteritis
 - Maternal weight loss, lowers risk of developing diabetes mellitus, hypertension, cardiovascular disease and breast and ovarian cancer.
 - Cheaper and easier (no need to prepare)
 - b. Techniques of breast feeding: (starting breastfeeding best after delivery)
 - Maintain right position: sit comfortably with back support.
 - Baby position: directly facing the nipple without turning his neck
 - Ensure good latching by having large part of the areola in his mouth
 - Start feeding by compressing the nipple and areola between your thumb and index finger
 - Allow your baby to feed for 10 minutes on each breast
 - Nursing frequency based on baby's demand
 - It's normal to feel period-like cramps while you feed your

baby, it's a normal reflex following breast feeds and it indicates that your uterus is going back to its normal pre-pregnancy size.

c. Other Advices:

- Milk supply improves with adequate sleep, fluids, relaxed environment and less Stress.
- Clean your breasts with water, keep the nipple dry with loose clothing. Avoid using antiseptics or soaps on the nipple.
- You may need to pump your breast to relieve pain or to store milk
- Engorgement may be helped with: hot shower, massage, milk expression, supportive bra
- Counsel about appropriate contraception methods such as progesterone pills. Breast-feeding alone is not a contraceptive method.

4. Assess: Understanding of the importance of breast feeding and exclude red flags (Fever, sore breast, bleeding or discharge from nipples indicating mastitis)

5. Assist: How the mother knows if the baby is getting enough breast milk:

- a. The baby has 6-8 wet diapers per day.
- b. Baby has 3-4 bowel movements per day.
- c. The baby is back up to birth weight by 2 weeks of age.
- d. Hearing the baby swallowing while breast feeding with clearly full cheeks.
- e. Milk leakage from one breast when you are feeding the baby from the other.

6. Arrange:

- a. Positive reinforcement (Many mothers did it and so you can, we are always available to support you) e.g.: Working mothers: "Still you have enough and excellent time to feed your baby during your maternity leave, even if you plan to stop after, but the best is to continue" "You can use working break hours to feed the baby or pump your breast."
- b. Schedule her a follow up.
- c. Provide appropriate contraceptive method and consider other options when breast feeding is stopped.
- d. Vitamin D drops for the baby and vitamin D with calcium tablets for mother.

6. Safety net: come back if any fever or sore breast.
7. Brief assessment of underlying conditions, screening for age.
8. Give away reading material if available.
9. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Post-partum Blues

1. Introduce yourself, establish good rapport, and respond to the patient's cues
2. Ask:
 - a. Patient's ice concern and expectations
 - b. Screen for depression: Low mood and/or loss of interest or pleasure in life in the last 2 weeks. If yes ask specifically by using the mnemonic (SIGE CAPS) and confirm the symptom's duration:
 - Sleeping more than usual with or without having hard time falling or staying asleep
 - Loss of interest or pleasure in life
 - Feeling worthless, hopeless or overly guilty
 - Low energy or motivation to do things
 - Having difficulty concentrating
 - Loss of or increased appetite with or without unexplained weight loss
 - Psychomotor agitation or retardation (feeling restless, irritable, anxious or tearful with increased crying)
 - Suicidality or Homicidally (having thoughts about hurting your baby)
 - c. Effect of the condition: ask about her ability to cope with the new changes (taking care of her newborn) and whether she is having current family support. Determine any difficulties in breast feeding
 - d. Past medical history [severe premenstrual syndrome or psychiatric illness], social history (home environment, social support, emotional or financial stressors, marital conflict, domestic abuse, alcohol use), family history and any taken medications or known allergies
 - e. Classify accordingly:
 - Postpartum blues: Mild dysfunction for less than 10 days with an onset within 2 to 3 days of delivery with prevalence of 80%. No suicidal thoughts.
 - Postpartum Depression: Moderate to severe dysfunction for less than 2 weeks. Onset is within first month to first year. Prevalence: 5 to 7% with or without suicidality
3. Advise: "It is common that mothers develop mood swings (episodes of happiness and crying) after child birth. They may feel a little depressed, have a hard time concentrating, lose their appetite or find that they cannot sleep well even when the baby is asleep. This starts 2 to 3 days after delivery and

known as "baby blues". But it goes away within 10 days after delivery. However, in some women, these symptoms might last longer or worsen with time; in that case it is called "postpartum depression."

4. Assess: Understanding and exclude red flags (suicidality or homicidality)
5. Assist: "This is not your fault, and you are not supposed to suffer alone. We are all here to help you and we will develop a plan to get you in the best state. There are things that you can do that other mothers with postpartum depression have found it helpful
 - a. Letting it all out:
 - "Regularly talk about your feelings to someone that you trust"
 - "Keep a diary every day, write down your feelings. Once you begin to feel better, you can go back and reread your diary this will help you see how much better you are"
 - b. Give self the right needs:
 - "Ask your family or friends to help you with childcare, household chores and grocery. It is important that you find some time for yourself to feel refreshed"
 - "Find time to do something for yourself, even if it is only 15 minutes a day. Try reading, exercising (walking is good for you and easy to do), taking a bath or meditating"
 - c. Avoiding stress:
 - "Childbirth brings many changes, and parenting may be a new role. When you're not feeling like yourself, these changes can seem like too much to cope with"
 - "Do nothing or only one thing at a time. Remember this is still a step in the right direction. Try not to get angry with yourself"
 - "Be honest about how much you can do, and ask other people to help you. You're not expected to be a "super mom"!"

Arrange:

- a. Positive reinforcement: "Many others did it before you, you can definitely do it, we are always available to support you"
- b. Follow up in one week
- c. Refer to psychotherapy or direct to stress management classes
- d. If the mother have criteria of postpartum depression she might need to be started on SSRI

- c. Give away reading material if available
- f. Health Maintenance (pap smear, contraception)

Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Hormone Replacement Therapy (HRT) Initiation

Key: Bold sentences indicate absolute HRT contraindications

Underlined sentences indicate relative HRT contraindications

1. Introduce yourself and establish good rapport
2. Ask:
3. Current complaint: hot flushes, sleep disturbances, sexual impairment, reduced activity, mood swings "I understand that you are visiting me today because you are disturbed by "hot flushes". Can you tell me more about it?"
4. Identify patients idea concern and expectations
5. Explore more: "To be able to help you, I need to ask you further questions":
 - a. Ask about decreased concentration and activity, disturbed sleep, night sweats, mood swings, sexual impairment, dyspareunia, dysuria or incontinence.
 - b. Menstrual History
 - c. Gynecological problems (vaginal bleeding, fibroids, hysterectomy)
 - d. Obstetric history (current pregnancy or breast feeding)
 - e. Past medical history: diabetes mellitus, cardiovascular diseases (hypertension, stroke, deep vein thrombosis), Liver disease, Cancers(malignant melanoma, endometrial, breast, ovarian, colorectal), gall bladder disease and migraine.
 - f. Family history: Osteoporosis, breast or endometrial cancer
 - g. Social history: smoking
 - h. Screening: last mammogram, pap-smear (any undifferentiated results), lipids profile
 - i. Reflection on life (patient's own feelings and quality of life activity)

Advise: "I understand how frustrated you are, all the feelings that you are describing point towards menopause. These symptoms can be improved with HRT. HRT are safe when indicated appropriately. In your case, HRT is considered safe because you have no health risks to prevent us from starting HRT and you will benefit from.." (Indicate the appropriate type) and explain clearly the advantages and disadvantages of HRTs

- a. Understanding Advantages:
 - Decrease hot flushes

- Improve sleep, muscle aches, mood, sexual activity and vaginal dryness
- Increase bone mineral density and decreases fractures risk in forearm, vertebrae and hip
- Decrease the risk of colorectal cancer

b. Understanding Disadvantages:

- GI upset, decreased appetite
- Nervousness
- Breast enlargement, spotting or vaginal bleeding, acne
- Increase risk of uterine cancer
- Increase risk of breast cancer especially if obese lady or when used for more than or equal to 3 to 5 years
- Increase risk of cardiovascular diseases, stroke and deep vein thrombosis if used in women 60 years or older.

7. Assess:

Determine your patient willingness and level of understanding HRT initiation, advantages and disadvantages." So what do you think about starting you in HRTs? " Do you think you can cope with those side effects?"

8. Assist:

- a. Choice of the appropriate medication
- b. Assurance: "To decrease the side effects, we will start you with the smallest dose and use them for the least time possible and at that time we will be stop it gradually"
- c. Answer questions and clarify concerns "Do you have any questions for me?"

9. Arrange:

- a. Positive reinforcement and reassurance "Many others did it before, you can definitely do it and we are always available to support you"
- b. Follow up soon and ensure safety netting
- c. Screening for age including booking for mammogram and pap-smear
- d. Give away reading material if available

10. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Well Child Advise

1. Introduce yourself and establish good rapport
2. Ask:
 - a. Mother's reason for visit
 - b. Child's health state, growth and development.
 - c. Explore feeding, oral health, sleeping, reading history, car seat use and safety measures.
 - d. Check mother's idea, concern and expectations.
3. Advise: Tailor it according to the child's age:
 - a. Sleeping:
 - * "By 6 months your baby should sleep in his or her own bed in a separate room and must be lying on his or her back or side"
 - * "Avoid loose bedding and soft toys on the couch"
 - * "Avoid over dressing or over heating"
 - * "By 12 months your child should have regular sleeping schedule with sleep over night and 1 nap during the day"
 - b. Feeding: [check breast feeding counselling page]
 - * "Breast feed exclusively at least in the first 6 months"
 - * "When weaning, introduce one food item at a time (3 to 14 days) in order to detect any allergy. Add cereals by 6 months. Add vegetables and fruits by 6 months. You may also start giving meat at 6 months, followed by fish and egg yolk at 8 months and finally give chicken by 9 months"
 - * "Establish a routine with 3 meals and 2 healthy snacks"
 - * "Feed on demand not per schedule"
 - * "Do not give fresh milk, egg white or honey until one year"
 - * "Do not add salt or sugar until 2 years of age. If your child wishes to have juice then dilute it at a rate of 1/10"
 - * "Teach him or her to drink in a cup by 6 months and avoid giving tea coffee or soft drinks"
 - * "Allow to eat using his or her own fingers by 9 months and self-feed using spoon by 9-12 months"
 - * "Never share spoon with the child to avoid risks of dental caries"
 - c. Car seats [refer to car seats station]
 - d. Oral health [check pediatric oral health page]

- e. Indoor safety
 - "Maintain smoke free environment"
 - "Never leave the baby alone on high surfaces"
 - "Keep safety plug on all electric sockets at home"
 - "Keep all detergents and medicines in the upper shelves"
 - "Use stair gates, safety cabinet, lock fridge door and put barriers around heaters and stoves"
 - "Avoid leaving the child unattended in potentially dangerous areas such as bathroom, kitchen, or swimming pool"
 - "Do not drink hot drinks while the baby is on your lap"
- f. Reading: This allows IQ development and attainment of social skills and encourages teaching the child to love books
 - "Start reading to your child from around 4 to 6 months"
 - "Use books with pictures and share a stories"
- g. Discipline:
 - "Start the time-out method at around 12 months of age for about 5 minutes followed by lots of hugging and cuddling"
 - "Praise good behavior"
 - "Share rules across all care-givers"
 - "Get down to the child's eye level when talking to him or her"

4. Assess: Answer any questions and check level of understanding

5. Assist: "Let's share a plan which is suitable for helping you"

- a. Coping with breast feeding
- b. Appropriate use of car seat
- c. Child discipline

6. Arrange:

- a. Positive reinforcement and reassurance "Many others did it before, you can definitely do it and we are always available to support you"
- b. Follow up soon and encourage child's presence
- c. Give away reading material if available

7. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Pediatric Oral Health

1. Introduce yourself and establish good rapport
2. Ask:
 - a. Mother's reason for visit
 - b. Child's health status, growth and development.
 - c. Explore feeding, oral health, sleeping behavior and any dental visits
 - d. Check mother's idea, concern and expectations.
3. Advise: "I am glad that you are here today, it is important to understand how to maintain good mouth hygiene for your child". Then counsel about the following:
 - a. Teething:
 - Starts from 6 months-3 years (may have tender gums when teeth erupt).
 - "Wipe your baby's face often with a cloth to remove the drool and prevent developing rashes"
 - "Give your baby something to chew on as rubber teeth rings. Make sure it's big enough to avoid risk of swallowing and breakage to small pieces. If contains liquid inside it may leak so better to avoid using them"
 - "A wet wash cloth placed in the freezer for 30 minutes makes a handy teething aid but ensure washing it after each use"
 - "Teething does not cause fever, so if your child develops any please return"
 - b. Feeding Habits:
 - "Your child should not fall asleep on bottles containing anything other than water"
 - "You should wean her or him from bottles at 12 to 14 months of age"
 - "Avoid giving juice to drink from bottles. Fruit juice should be in a cup with meals or at snack time"
 - c. Thumb and finger sucking:
 - "It is perfectly normal for infants and many stop sucking by age 2"
 - "Prolonged thumb sucking can create crooked teeth or bite problems. If the habit continues beyond age 3, your child will need a professional evaluation"

d. Dental visits:

- "Ongoing dentist visits begin around age of 1 year or after the eruption of 1st tooth"
- "The earlier the dental visit, the better the chance of preventing dental problems like caries. It also makes your child comfortable with his/her dentist, helps build a rapport, and establishes the good habit of regular dental check-ups"

e. Cleaning:

- "Clean your baby's teeth as soon as they come in with a clean cloth"
- "Use toothpaste when your child can spit it out, usually around age of 3. Choose one with fluoride and use only a pea-sized amount or less in younger kids. Don't let your child swallow the toothpaste or eat it out of the tube because an overdose of fluoride can be harmful"
- "By the time all your baby's teeth are in, try to brush them at least twice a day and especially after meals"
- "It is also important to get your child used to flossing early on. A good time to start flossing is when two teeth start to touch. Talk to your dentist for advice on flossing those tiny teeth"
- "You can also get toddler interested in the routine by letting them watch and imitate you as you brush and floss"
- "Check your baby's teeth, healthy teeth should be all one color, if you see spots or stains on the teeth take your baby to the dentist"

f. Fluoride supplementation:

- "Research showed that children drinking water that contain less than 0.6 ppm fluoride should be on supplements. 1.1% NaF containing toothpastes are effective in reducing dental caries in children". (American academy of pediatric dentistry, 2014)

4. Assess: Answer any questions and check level of understanding

5. Assist: "Let's share a plan which is suitable for helping you"

6. Arrange:

- a. Positive reinforcement and reassurance "Many others did it before you with their children. You can definitely do it and we are always

- b. available to support you".
- c. Follow up soon and encourage child's presence.
- d. Refer to pediatric dentist.
- e. Prescribe 1.1% NaF containing toothpaste.
- f. Give away reading material if available.

7. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Child with Fever

1. Introduce yourself and establish good rapport
2. Ask:
 - a. Onset, duration, readings if any, associated symptoms (runny nose, cough, rash, nausea or vomiting, diarrhea, ear ache, headache), relieving factors (paracetamol or ibuprofen). If any medications given ask about dose, frequency and last given dose
 - b. History of recent travel or contact with sick individuals
 - c. Vaccination status and recent ones
 - d. Parent's idea, concern and expectations (medication, vaccination, care related to underlying condition). Correct any myths ('teething does not cause fever').
 - e. Past medical, family, and social history
 - f. Growth, development and vaccine history
3. Advise:
 - a. "I understand your worries, fever is a very common source of mothers anxiety"
 - b. "Fever is a very good sign of your child's body being strong enough to fight germs but we have to be very careful it doesn't persist or increase. This is because it can lead to dehydration so give your child lots of fluids. It can also lead to febrile convulsions"
 - c. "Fever does not mean the child has a serious illness. It is normal for them to have at least 5 to 6 episodes of fever in a year".
4. Assess:
 - a. "A clinically significant fever in children younger than 3 years is a rectal temperature of at least 38°C [100.4°F]. Axillary, tympanic, and temporal artery measurements have been shown to be unreliable."
 - b. Exclude red flags (febrile convulsions, urinary symptoms, recent travel, neck stiffness, altered mental status, non-consolable crying, rash)
 - c. Reassurance when serious illness is excluded (child interested in playing, eating and drinking well, no skin changes, good and fast response to antipyretics).
 - d. Reassurance and clear addressing of mothers concerns "for now I think you can take good care of your child with few tips and we will follow him closely"

e. Fever in young children (less than 2 years of age):

- Evaluation of febrile infants younger than 29 days should include complete blood count with differential, lumbar puncture, blood culture, chest radiography, urinalysis, urine culture. Stool testing should be performed if diarrhea is present
- Evaluation of febrile young infants (more than 28 days but less than 3 months) should include urinalysis and urine culture and complete blood count with differential
- Urinalysis and urine culture are recommended as part of the evaluation for all febrile infants 24 months of age or younger with unexplained fever

5. Assist: "Let's share a plan together to help you"

- a. "Encourage fluid intake, dress lightly, cotton, single layer and avoid covering your child with multiple or thick blankets"
- b. "Measure body temperature and if higher than 38 degrees for 3 consecutive days go back to your doctor"
- c. "Give your child a warm bath. Cold towels are irritating, try to avoid them"
- d. "Do not use alcohol or vinegar for bathing a child with fever, it is dangerous!"
- e. "Do not use aspirin"
- f. "Use Adol (paracetamol) or ibuprofen for lowering body temperature, use weight to determine proper dose or call your doctor for help, give doses regularly every 6-8 hours at least in first 24 hours of onset"
- g. "To prevent over dosing of antipyretics, store them out of reach of children"

6. Arrange:

- a. Follow up in 2 days or earlier if no improvement
- b. Brief assessment of underlying conditions, age appropriate screening and vaccination
- c. Give away reading material if available
- d. Safety netting: "If he or she developed rash, neck stiffness, altered mental status or non-consolable cry please come back to the clinic"

7. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Febrile Convulsions

1. Introduce yourself.
2. Establish good rapport.
3. Ask:
 - a. Explore mother's idea, concern and expectations.
 - b. Details of the incident: onset, type (focal/generalized tonic clonic seizure), duration (more or less than 15 minutes), mother's actions, any doctors visit or management if done.
 - c. Any preceding febrile infection (upper respiratory tract infections or urinary tract infections) or provoking factors (flickering lights, lack of sleep or food).
 - d. Red flags: altered mental state, rash, abnormal gait or behavior.
 - e. Perinatal, past medical and family history.
 - f. Growth, development and vaccinations history.
4. Advise:
 - a. "Febrile convolution is a common condition that occurs in 2 to 5% of children between the ages of 6 months and 5 years. It occurs because their brain cannot handle high body temperatures leading to disturbance in its activity that results in abnormal movements, or fits. It is totally benign and neither affects the growth or development of your child, nor his or her academic performance or intelligence".
 - b. "If your child is getting a seizure for the first time, then he or she needs to be assessed by a doctor to exclude any other related conditions. Usually no tests or imaging is needed".
 - c. "It is important for you to know that about one third of children who experience a single simple febrile seizure may have another one by the time they are five years (the lifetime rate of epilepsy slightly above than that of the general population around 3 to 5%). However, controlling fever is the hallmark in preventing further febrile convulsions and no preventative medication is needed".
5. Assess: Mother's knowledge about the condition and answer any questions.
6. Assist: "So let us share a plan that is suitable for helping you and your child to prevent further attacks".
 - a. Treat the fever whenever the child has it:

- "Bath or apply sponge tips using tap water. Avoid vinegar or alcohol"
- "Put on light clothes"
- "Give antipyretics (paracetamol)"

b. Treat the cause of the fever:

- Identify cause of fever and treat it appropriately.
- Anticipate fever with some vaccines (common after measles, mumps and rubella (MMR) vaccine. If that's the case advise the mother to start giving antipyretic for atleast 24 hours.

c. Treat the fit:

- Do not panic
- Note the time
- Protect your child's airway
- If child has anything in his/her mouth, clear it with a finger to prevent choking. Don't try to force anything into your child mouth
- Place the child on the side or abdomen to help drain secretions and avoid choking
- Don't try to restrain your child or stop seizure movements.
- Ensure that the child is safe from surroundings
- Loosen all clothes
- If the fit continues for >5 minutes, administer per rectal diazepam
- Call for an ambulance

7. Arrange:

- a. Positive reinforcement "We are always available to support you"
- b. Prescribe:
 - Adequate dose of antipyretics (example: Paracetamol)
 - Treat the cause of the fever
 - You may like to give rectal diazepam for possible future attacks.
- c. Follow up in two days or earlier if any red-flags appear
- d. Give away reading material if available

8. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Telephone Consultation

Areas to focus on: Vomiting is very common among children. Differential diagnosis in preschool children includes: gastroenteritis, otitis media, tonsillitis, urinary tract infection, meningitis, hepatitis, appendicitis, intestinal obstruction (secondary to adhesions and foreign body), intussusceptions, Meckel's diverticulum, malrotation, volvulus, raised intracranial pressure (as in trauma), drug toxicity, diabetic ketoacidosis and food or milk allergy.

1. Ask: "Hello, this is Dr. X, the Family medicine resident on-call, may I know whom am I talking to?" (Make sure you take the caller's name, contact number in order to be able to call him or her back if the call disconnects, address, and electronic medical number).
 - a. Clarify patient identity: name, age, his primary doctor-health care center, and relation of the caller.
 - b. Clarify the problem: complaint (example vomiting), nature (bilious, bloody, with or without food content, projectile), duration, aggravating and relieving factors, any associated symptoms (fever, irritability, jaundice, skin rash, cough, runny nose, abdominal pain or distension or obvious mass, diarrhea (bloody, jelly, pale), constipation, dysuria, decreased oral intake, weight loss, history of trauma or toxin ingestion or allergy).
 - c. Clarify is it an emergency or not: non-responding fever, stiff neck, bloody vomitus or bloody diarrhea, skin rash, non-tolerance to oral feeds, anuria for hours, or toxic ingestion.
 - d. Clarify management taken and duration.
 - e. Explore the Patient's ICE.
2. Advise: "Mrs. X, from the information that you have told me so far, it seems like your child does not have any alarming feature and that he or she has a simple gastroenteritis. In such cases, the treatment is supportive and the most important thing is to avoid dehydration so:
 - a. "Increase fluid intake, you may use oral rehydration solution if available"
 - b. "Offer healthy food to him or her"
3. Assess: Answer any questions and check level of understanding
4. Assist and Arrange:
 - a. Safety netting: "As of now, the illness is probably not serious

especially that your child is still interested in playing, eating and drinking. However, if he or she deteriorates, becomes drowsy or irritable, develops stiff neck, skin rash, non-responsive fever, bloody vomitus or diarrhea, refuses oral feeds or not pass urine for hours please, take your child immediately to the emergency department for full assessment.

- b. Follow up in the morning in the clinic for further assessment and treatment as needed.

5. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Advice on Car Seats use

1. Introduce yourself and establish good rapport
2. Ask:
 - a. Where does the child sit in the car and if parents are using a car seat
 - b. Age of the child weight and height
 - c. Past medical history and any special needs as the need for different restraints
3. Advise:
 - a. "As your doctor, I think it is very important for you to understand that children car seats have to be used because vehicular accidents cause significant injuries and deaths in children".
 - b. "Your body protected your child when he or she was in your womb, but it is no longer sufficient. It actually can cause more harm than benefit in case of an accident".
 - c. "Every child needs to use a car seat until he or she fits correctly in the lap and shoulder straps of the automobile safety belt".
4. Assess:
 - a. Level of understanding and answer any questions
 - b. Motivation and willingness to use the car seat
 - c. Previous attempts of use or failures
5. Assist: "Let's share a plan which is suitable for helping you"
 - a. According to your child's weight of ___ Kg, Height of ___ cm, and age of ___ months, he or she will benefit the most from ___:
 - Infant/Rearward seat: "To use when your child is 9 to 10 Kg, 66 to 74 cm. It is light weighted, portable, and inexpensive"
 - Convertible seat (can be placed both rearward or forward): "To use when your child is 9 to 18 Kg, and up to 102 cm in height"
 - Forward facing seats: "To use when his or her weight is between 14 to 18 Kg, and 127-145 cm in height"
 - Booster seat: "To use when he or she outgrows the above measurements"
 - b. General rules:
 - "Install the car seat correctly as instructed by the

manufacturer and place the chair rear-ward until your child is more than 1 year of age and more than 9 Kgs in weight"

- "Secure the seat with safety belt or by using the Lower Anchors and Tethers for Children (LATCH) restraint system"
- "Harness strap (the child seat belt) should be flat and closely fitted on your child. Never put the car belt shoulder strap behind the back or under the arm of your child"
- "Advance if your child exceed the weight limit or his or her head is 1 inch or less to the top of the care seat"

6. Arrange:

- a. Positive reinforcement: "Many mothers did it before you, you can definitely do it, we are always available to support you"
- b. Follow up soon
- c. Anticipate complications (non-cooperative child)
- d. Safety netting: Inform about injuries resulting from wrong positions
- e. Brief assessment of underlying conditions and screening for age
- f. Give away reading material if available

7. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Toilet Training

1. Introduce yourself
2. Establish good rapport
3. Ask:
 - a. Parent's idea, concern and expectations
 - b. "To be able to help you, I need to know some information about your child."
 - c. Age of the patient (Most children are trained by 2½ to 4 years at daytime and by 8 years at night time)
 - d. Prenatal, natal, postnatal and child's development
 - e. Past medical history (diabetes mellitus) and taken medications
 - f. History of constipation, dysuria, abnormal movements, anal itching, and presence of any psychological problems
 - g. If vaccinations are up to date
 - h. Family history of enuresis or having a family member who had problems in achieving toilet training
4. Advise: "As your doctor, I think it is very important for you to know when your child is ready to be trained and this can be assured when he or she:"
 - a. "Tells you that he or she is wet"
 - b. "Helps undressing"
 - c. "Shows interest in the toilet"
 - d. "Stays dry longer hours"
 - e. "Has regular bowel movements"
5. Assess: Parents knowledge and level of understanding about toilet training
"To be able to help you, I need to know what you know about toilet training."
6. Assist: "Let's share a plan which is suitable for helping you"
 - a. "To start, know that your child would need 4 weeks or more to be trained"
 - b. "Do not start if your child is ill"
 - c. "Stop the trial if your child gets upset and retry in one month"
 - d. "Remove nappies and use pants"
 - e. "Explain to your child what a potty or toilet seat is"
 - f. "Put your child on it regularly in the morning, after meals, before and after going out and anytime in between that you feel he or she needs to go"
 - g. "Allow 5 minutes on the seat with encouragement and praise."

- h. "Handle accidents calmly"

7. Arrange:

- a. Positive reinforcement: "Many others did it before you, you can definitely do it, we are always available to support you"
- b. Follow up soon
- c. Anticipate complications: "Remember, it is common for children do not achieve toilet training from the first trial. For persistent bed wetting, please come back for support and advise"
- d. Highlight red flags: urine frequency and fever or if not maintaining dryness may be indicative of urinary infection; If not dry at day time by age 4 parents must seek medical advice
- e. Give away reading material if available

8. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Breath Holding Spells RJD hx ct

1. Introduce yourself and establish good rapport
2. Ask:
 - a. Detail history of attacks: Onset, duration, frequency, associated symptoms (rolling up eyes, drooling, tongue biting, jerky movements, stiffness, urine incontinence, postictal confusion or sleeping). Precipitating factors like excessive crying or fever
 - b. Any ongoing problems, drug history, significant past or family history
 - c. Child growth, development and vaccination history
 - d. Family dynamics and relationship
 - e. Stress or new events in the family (newborn baby or nanny, visiting adult)
3. Advise: "As your doctor, I think it's very important for you to understand the nature of this phenomena and its reassuring course"
 - a. Understand that the problem is stressing for the family and usually they become worried and anxious
 - b. "This phenomenon is known as breath holding attacks. The child simply goes into a tantrum by letting out a loud cry and then holding his or her breath"
 - c. "He or she can then become pale or blue and can go into a simple faint. It happens when your child is angry, frustrated, in pain, or afraid"
 - d. "It is common in children 1 to 5 years of age (5% of children) and may have positive family history"
 - e. Assure the parents that it is self-limited (takes 10 to 60 seconds and the child will start breathing again) and that it is not harmful and has good prognosis (children usually grow out of it before school time). Epilepsy and mental deficiency are unrelated to breath holding spells
 - f. "You may make a video record of the event to help in the diagnosis"
4. Assess:
 - a. Explore idea, concern and expectation.
 - b. Don't forget to exclude red flags if any (syncope, loss of consciousness, convulsions, jerky movements and history of cardiac disease)

5. Assist: "Let's share a plan which is suitable to help you in this situation"

- Reassurance
- "Don't give attention or over-protection. Don't show that you are worried but ensure safety of surrounding environment during attacks"
- "Put the child on his or her side with both knees slightly bent together and the lower arm pulled out behind them"
- "You can help in decreasing the attacks by making him or her feel secure, ensure your child is getting enough rest and help in managing his or her frustration"
- Investigation: Complete blood count and you may consider Iron level Measurement.

6. Arrange:

- Follow up after 2 weeks
- Anticipate complications, safety netting, red flags
- Brief assessment of underlying conditions and age appropriate screening
- Give away reading material if available

7. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

عاليها بحسب ١-٥ مسوان لست الاشت
ـ (تحقيق الحجاج) وليس له نهل
ـ والنزار السوداني

Temper Tantrum

1. Introduce yourself and establish good rapport
2. Ask:
 - a. Explore parent's idea, concern and expectations
 - b. Detailed history of the behavior, onset, frequency, type and period of behavior, child's behavior in between the attacks, history of getting injured, any provoking factors for this behavior, associated symptoms (sleeping disturbance, agitation, hyperactivity, isolation or enuresis), heating or speech problem
 - c. Any ongoing problems, hospital admissions, past or family history and drug history
 - d. Child growth, development and vaccination history
 - e. Family dynamics and relationship
3. Advise: "As your doctor, I think it's very important for you to understand the nature of this phenomena and its reassuring course"
 - a. "The problem is stressing for the family, they become worried and anxious"
 - b. "This phenomenon is known as Temper Tantrums. It is a behavioral disorder in children in the form of emotional outbreak resulting in kicking, screaming, hitting or breath holding spell."
 - c. "The outbreak can range from 20 to 30 seconds to several hours"
 - d. "It usually starts at 12 to 15 months of age and may persist till 3 to 4 years old."
 - e. "It occurs mostly when child is tired or bored and feels angry or frustrated like if they told no, when things don't go their way, when they cannot manage more difficult tasks, cannot express what they want to say, when mother leaves them even for brief period of time and sometimes there is no obvious reasons."
4. Assess:
 - a. Family history of same problem
 - b. Any major recent life event (Divorce, death of relative, changes in school or home)
 - c. Explore relationship with siblings, child's performance and behavior at school, any social problem (Marital problems or stresses)
 - d. Identify parent's reaction towards such behavior

5. Assist:

- a. Reassurance "Tantrums are relatively common and not harmful"
- b. Help parents on how to deal with the situation:

Before the attack, avoid the storm:

- Give the child enough attention
- Keep off-limits objects out of the sight and out of reach to make struggles less likely to occur.
- Set the stage of success when kids are playing or trying to master a new task.
- Know your child limits. If he or she is tired avoid engaging him in activities.

During the attack:

- "By staying calm, you'll help him calm down too"
- "Ignore the behavior and don't give him what he or she wants. Pretend to ignore them even when you feel you cannot. When ignored, the problem will probably get worse for few days before it starts to improve."
- "If you cannot ignore then try to distract the child by directing his or her attention to something of interest"
- "Leave the area, keep him in quiet and in a safe place, but do not lock him or her in a room"
- "Use punishment approach, 'time-out' in particular. Consider firm action by taking the child to a safe room or space and insist they be quiet (usually for 2 minutes) before they come out of time-out."

After the attack:

- Do not reward the child's tantrum by giving in
- Express love to him or her
- Make sure the child is getting enough sleep which can reduce tantrums dramatically

c. Encourage to keep a record of the tantrums with the possible reasons

d. Prevention: "Plan ahead to prevent tantrums"

- Adapt healthy life style
- Sleep and eat on time
- Let the child have new experience in his life
- Reward him or her for any good behavior
- Make some realistic and firm rules to follow

- Be flexible and decide if the demands are reasonable before saying 'yes' or 'no' to your child and stick to your decision.
- Drugs have no place in the management of temper tantrums

6. Arrange:

- a. Follow up after 2 weeks
- b. Anticipate complications, safety netting, red flags (attacks of cyanosis for more than 1 minute, resultant post-ictal state, Injuries during the attack)
- c. Brief assessment of underlying conditions, screening for age
- d. Give away reading material if available

7. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Type: paranoid
 catatonic x the 5 types
 Schizoaffective
 Schizophrenia

Remember to Counsel about disease, medications, and side effects.

6.5% if
 ONE of parent has
 13% → if both

1. Introduce yourself and establish good rapport.
2. Ask:
 - a. Explore reason of clinic visit, onset, associated symptoms (positive symptoms including hallucinations, hearing voices or delusions and negative symptoms such as flattened affect, loss of sense of pleasure, loss of will or drive social/occupational withdrawal, deterioration in hygiene and grooming, unusual behavior or outbursts of anger).
 - b. Past medical history and hospital admissions, family history and medications.
 - c. Knowledge about schizophrenia.
3. Advise: "As your doctor, I think it's very important for you to know that schizophrenia is a brain disorder that keeps you from thinking clearly. It can cause you to see or hear things that aren't there, or to believe things that aren't true and this all can disturb your daily life activities".
 - a. Schizophrenia is treated with medications that help in controlling symptoms. There are mainly two types of medications.
 - b. Everyone reacts differently to medications. "You may experience some neurologic side effects such as feeling stiff, tremors, fixed upper gaze, neck twisting or facial muscle spasms). Other symptoms including weight gain. Do not worry you will be given the one that works best for you with fewest problems and you will be helped in managing these side effects".
 - c. "Remember to take your medications regularly. If you suddenly stop them this could precipitate a relapse or your symptoms may get worse".
 - d. Driving and occupation: Research shows that visual perceptions do not prevent from driving but doctors may assess patient's cognitive function to determine their driving capacity.
 - e. Sports: Studies encourage sports participation as it has a positive effect on schizophrenia symptoms.
 - f. When travelling, is important to wear schizophrenia card or bracelet with details of medications, physician and hospital number especially.
 - g. Female patients:

- "You can get pregnant when you decide to, many other did it and you can too. But you should let us know as you may need to switch to medication that is less likely to cause problems for your baby."
- "You might be interested to go off medication to protect your baby. But that could actually do more harm than good. Women who stop their medication before or during pregnancy often get severe schizophrenia symptoms and end up needing more medication than they would have if they had stayed on medication in the first place."

4. Assess:

- a. Answer any questions and check level of understanding.
- b. Medication side effects.
- c. Screen for depression and substance abuse.

5. Assist: "Let's share a plan which is suitable for helping you. I am sorry to say that there is no cure for schizophrenia, but it can be treated and managed in several ways and we will work in a team with other specialties as needed":

- a. Starting the appropriate antipsychotic medication.
- b. Offer psychotherapy approach, such as cognitive behavioral therapy, assertive community treatment and supportive therapy.
- c. Self-management strategies and education.

6. Arrange:

- a. Follow up and monitor drug levels.
- b. Refer to Psychiatric Rehabilitation to improve social life and encourage independent living skills.
- c. Anticipate complications, safety netting, red flags (suicidal thoughts).
- d. Provide age appropriate screening.
- e. Give away reading material if available.

7. Communication skills: ensure organized approach, mixed questioning style (open and close ended questions), active listening, clear language and reflection on patient's ideas, concerns and expectations.

Notes

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Family Medicine OSCE First Aid

"The OSCE is an approach to the assessment of clinical competence in which the clinical competencies are assessed in a planned and structured way with attention being paid to the validity of the examination." (Harden, 1998)

The Arab Board of Family Medicine uses an OSCE based examination to certify graduating residents at the end of four years of training. This manual is prepared by residents of the Family Medicine Program, Sheikh Khalifa Medical City in Abu Dhabi, and is intended to provide a simplified resource for students who have completed their training requirements and are preparing to pass the final examination.

